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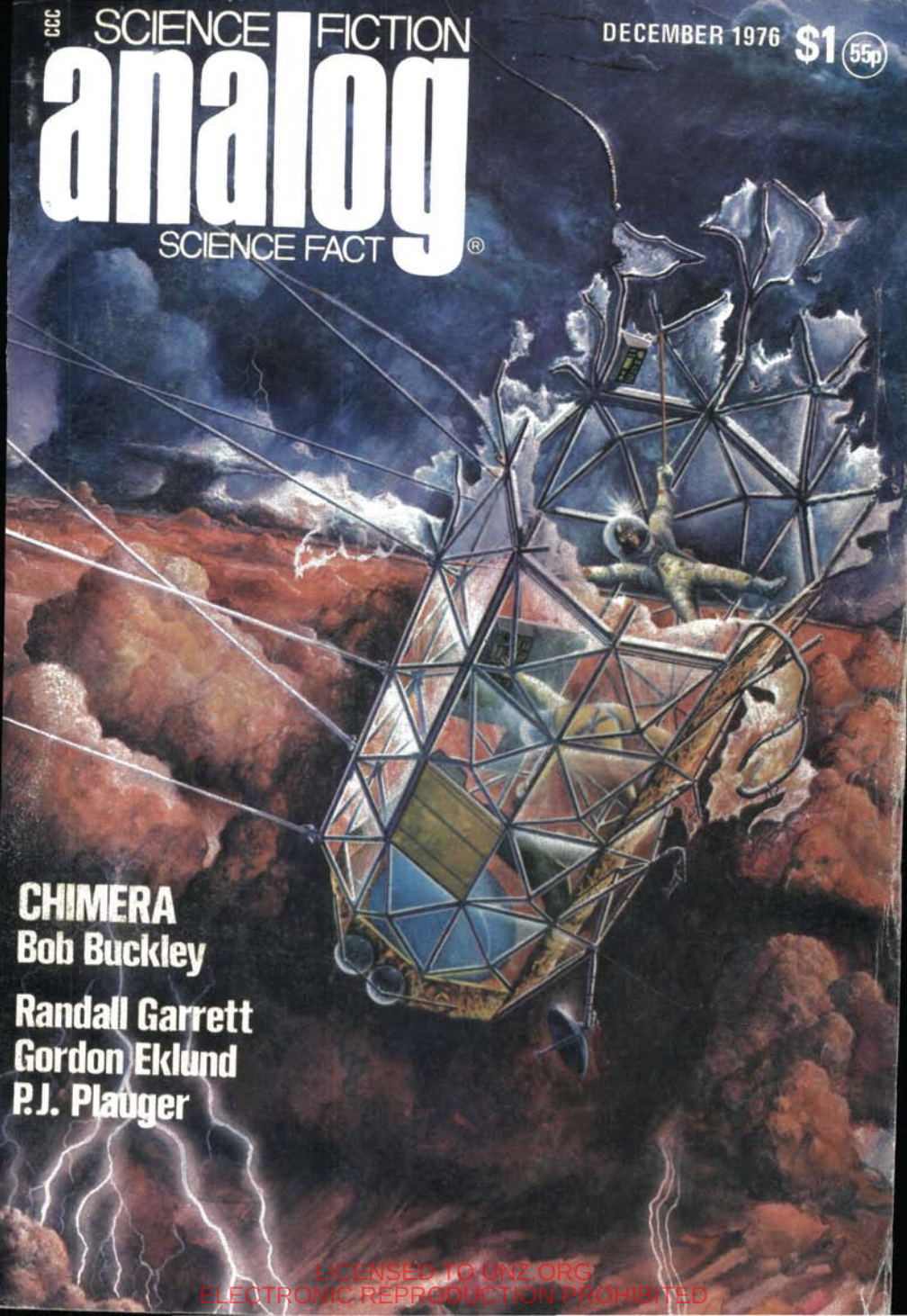

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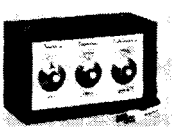

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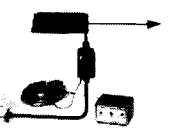

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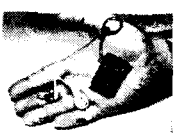

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If war is too important to be left to the generals, then science is certainly too important to be handed over to the politicians.

There is a struggle going on in America today over the fundamental issue of who should control scientific research. In an age when molecular biologists can tinker with the basic stuff of life, nuclear weaponry is proliferating all over the planet, and the first tantalizing suggestions of life on another world have been found, who should make the effective decisions about the scope and direction of the nation's scientific research efforts? Who should decide on whether a new experiment or investigation is worth pursuing?

Until very recently, the scientists themselves made these decisions. Using a system of peer review, scientists would examine proposals for new research programs and either recommend that they be funded or reject the proposal. The funding would then be obtained directly from the university where the research was to be done, or from a sponsor—sometimes a private donor of funds, but most often a Federal agency such as the National Science Foundation or the National Institutes of Health.

This system worked well for *basic* research efforts: scientific investigations that have no immediate application to the practical world, but are undertaken to increase fundamental knowledge. Applied research (where a definite application of existing

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knowledge is the goal) and engineering development programs are handled in a completely different way. Usually they are funded directly by industry or by a "mission" agency of the Government, such as the Department of Defense or NASA.

Basic research efforts, therefore, have until quite recently been controlled and judged by the scientists themselves. This has led to occasional grumbles about an "old boys" system, where really new ideas by young researchers or by scientists from relatively small schools are ignored in favor of programs proposed by the "insiders."

But in general, the Congress controlled the total amount of money appropriated to agencies such as the National Science Foundation, while the scientists themselves decided on the individual research efforts that the money would be spent on.

Enter Senator William Proxmire (D., Wisc.).

There is a long tradition in American politics that equates "reform" with budget-cutting. The reasoning behind this tradition is based on the assumption that large governmental budgets are the results of corrupt politicians who are padding their payrolls. Thus a "reform" politician reduces budgets and thereby returns honesty and purity to the body politic.

Sen. Proxmire has used this tactic on the nation's scientific community. Used it like a club.

Over the past few years he has proclaimed to the press and public a series of "Golden Fleece" awards, in which he derides scientific research programs that he brands as a waste of the taxpayers' money. An example from his own press releases:

"My choice for the 'Golden Fleece' Award for the biggest waste of the taxpayers' money for the month of April (1975) goes jointly to the National Science Foundation, National Aeronautics and Space Administration, and the Office of Naval Research for spending almost $500,000 in the last seven years to determine under what conditions rats, monkeys, and humans bite and clench their jaws. From the findings of these studies it is clear that the Government paid half a million dollars to find out that anger, stopping smoking, and loud noises produce jaw-clenching in people."

In other press releases, he has excoriated the NSF for funding research efforts on: Hitchhiking, a viable addition to multimodal transportation systems ($15,870); preliminary investigation of the special impact of television on blacks ($121,700); social behavior of Alaskan brown bears ($27,600); comparative histology of primate teeth ($17,200); and African climate during the last Ice Age ($112,200).

Month after month, Sen. Proxmire has announced his "Golden Fleece" awards to a chuckling Washington press corps. The National Science Foundation counters that, for example, the jaw-clenching study was part

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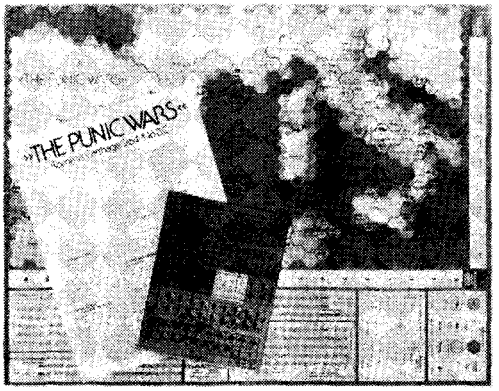

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of a psychobiology program designed to establish new techniques for measuring aggression in animal subjects exposed to painful stimuli, and to correlate the results with the behavior of human subjects exposed to stressful situations. In other words, what makes people behave aggressively? What turns one human being into a rapist, a juvenile delinquent, or a war hero, while another human being under the same conditions will run away and hide?

It would be difficult to conceive of any fundamental scientific investigation that could not be made fun of at its earliest stages. (See "Grant Titles from History" in our April 1976 issue.) But Sen. Proxmire makes research programs sound silly and wasteful by implying that there could never be any useful, practical, beneficial result from such studies.

His tactics are those of another Wisconsin Senator, the late Joseph McCarthy, who in the 1950s branded people "Communists" and "traitors" with no evidence at all. His victims' refutations were buried in the news media under still more screaming headlines about more "Commies" and "subversives" hiding under every bed. Many of McCarthy's victims were pilloried and disgraced. Many lost jobs and careers. Some committed suicide. Not one of McCarthy's victims was ever convicted in a court of law of espionage or treason.

Sen. Proxmire is using McCarthy tactics on scientific research. Why? Because so much tax money is being wasted? More money goes into protecting the dairy industry (a Wisconsin mainstay) than the NSF has ever seen in its till. No, it seems that the Senator has found a convenient hobbyhorse to ride, one that has generated national publicity for him. And besides, scientists are notoriously weak at defending themselves.

Note that his "Golden Fleece" awards have died away since the Democratic Party's Presidential primaries ended. Even more interesting, note that the Senator has never attacked research on such a "useless" subject as hair folicle renewal and transplantation. While he was a dark horse Presidential hopeful, and wooing his current wife, the Senator availed himself of modern scientific know-how to refurbish his balding pate with a neat crop of transplanted hair. *That* kind of cosmetic research he finds useful. Determining how television feeds the smoldering fires of resentment in black ghettoes, he finds unimportant.

Is all this a tempest in a typewriter? Does it really matter that one Senator is poking fun at the scientific establishment? After all, the Federal budget for 1977 shows a slight increase in funding for the NSF.

But look at what's happening in the Congress at large. For more than a year there's been a movement afoot, mainly in the House of Representatives, to scrap the scientists' peer review system in favor of having the Congress itself (i.e., its Committees)

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decide on funding individual research programs.

In April 1976, just before their Easter Recess, the House specifically cut off funding for one research effort, a study on the effects of marijuana on human sexuality. It was done in typical Potomac fashion—the cutoff of funds was tacked on as a rider to a huge appropriations bill and passed practically without notice as the Congresspersons hurried through their accumulated business before racing back home for the Easter holidays. Apparently all it took to sway key Representatives were "marijuana" and "sex."

Look at what's happening on the local level of government.

In July, the city government of Cambridge, Mass., awoke to the fact that Harvard University was about to engage in recombinant DNA experiments. (See "Genetic Politics," August 1976.) In a stormy meeting of the City Council, the politicians grappled with the risks and benefits of molecular biology research. They heard charges of Frankenstein-like callousness leveled against the scientists. They heard assurances from representatives of Harvard that the experiments would be conducted with the utmost care, so that there would be practically no danger at all of artificially-mutated bacteria escaping the laboratory. They heard the mayor of Cambridge complain that no one from Harvard had told him anything about this beforehand; he had found out about it by reading a local underground newspaper. Apparently the Boston newspapers and popular science magazines are not among the mayor's steady reading.

By the wee hours of the morning the exhausted City Council decided to do what puzzled politicians always do: appoint a committee. Harvard agreed to a three-month suspension on recombinant DNA research (this, after a voluntary two-year moratorium by the researchers themselves!), while the city established a Laboratory Experimentation Review Board, to be composed of scientists and private citizens. The Board will examine the problem and report back to the Council.

But what happens next? A small vocal pressure group, waving perhaps some of Sen. Proxmire's press releases, could persuade the good citizens of Cambridge and their political "leaders" that the scientists are both fools and Frankensteins. The City could try to enforce a total ban on DNA research. And then, perhaps, nuclear research. Cancer research? Astronomical research? Where does it end?

Later in July, Massachusetts Senator Edward Kennedy, together with Sen. Jacob Javits (R., N.Y.) sent a letter to President Ford, urging him to make all recombinant DNA research—including any done in industrial laboratories—subject to Federal control. The implication of the letter was that if the President does not take command of the situation, the Congress will.

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Recombinant DNA research certainly entails some hazards. So does nuclear physics research. So does research into human behavior modification, chemical engineering, and techniques for social change. Since *all* scientific research is concerned with examining new ideas and new capabilities, *all* scientific research inherently carries some risk to the status quo. If politicians learn that the public will allow them to control or even stifle one branch of scientific inquiry, they will inevitably reach out to control all of science.

This would be like going to your local party committeeman for brain surgery.

Meanwhile, at least one research scientist has mounted a counterattack against Sen. Proxmire. Ronald Hutchinson was director of research at Kalamazoo State Mental Hospital, in Michigan, in 1975 when the Senator gave his "Golden Fleece" award for the study of teeth-clenching in stressful situations. It was Hutchinson of whom Proxmire's press release stated: "The good doctor has made a fortune from his monkeys and in the process made a monkey out of the American taxpayer."

Dr. Hutchinson is suing the Senator for six million dollars, on the grounds of libel. As every Congress member knows, Senators and Representatives are immune to prosecution for statements made in pursuit of their Congressional duties. But according to Hutchinson's suit, Proxmire not only implied that tax money was going into his (Hutchinson's) personal pocket, the Senator ridiculed the research work on radio and television talk shows, and this has led to the loss of funding for his work.

And what did Sen. Proxmire, the apostle of economy in government, do when this lawsuit landed on his reforested head? Ever mindful of protecting the American taxpayer, he graciously allowed the Senate to pay his legal fees, rather than allow the Justice Department to provide legal aid or foot the bill himself. This way, he can pick his own lawyer and get you and me to pay for it.

That's the kind of selfless dedication that is attacking scientific research in this nation. THE EDITOR

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Is it always true
that he who sows the wind
reaps the whirlwind?
BOB BUCKLEY

chimera

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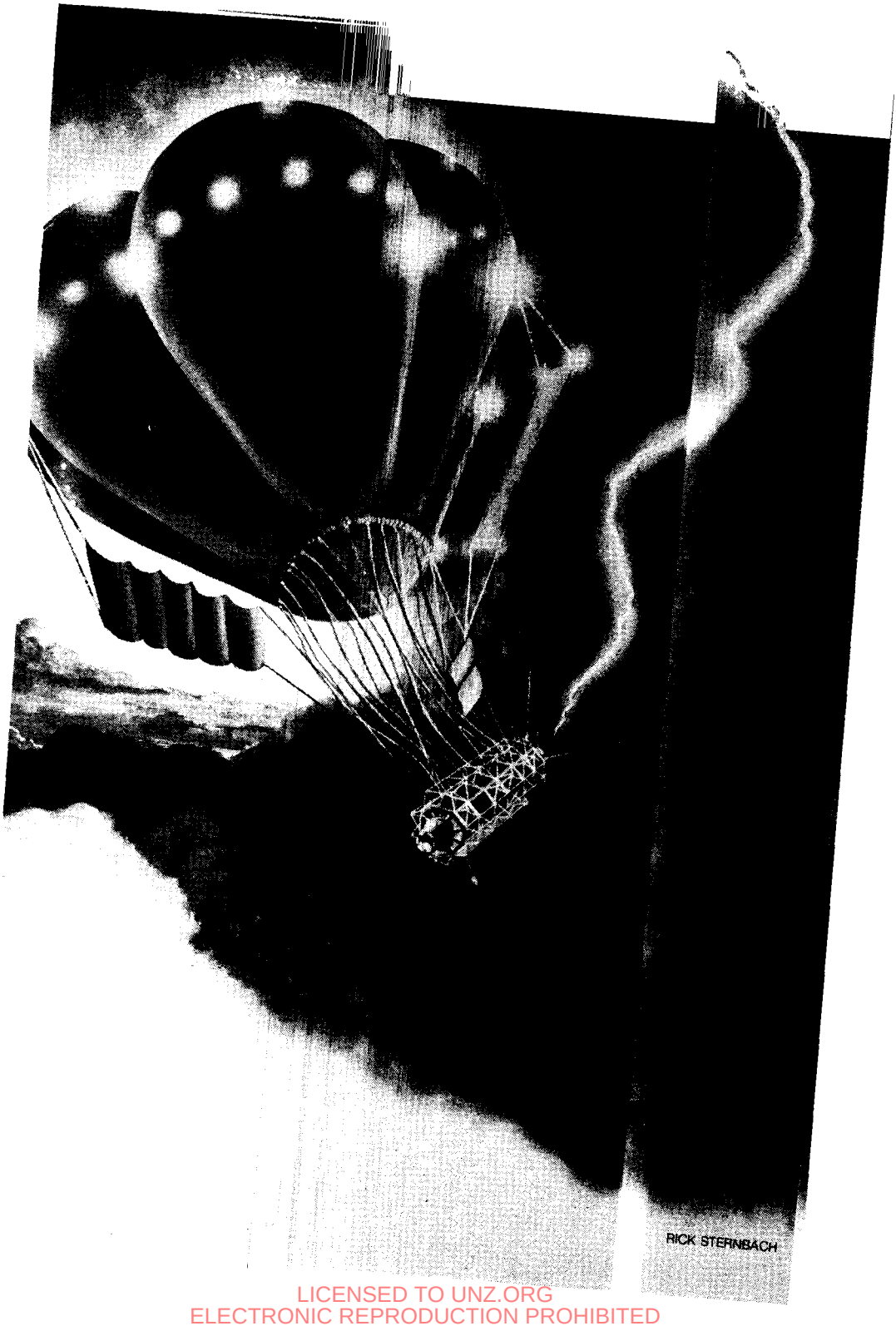

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"Another fine mess," Poulton said grumpily, surveying their listing, battered craft as it wallowed through the twisting corridor of a cloud canyon.

Neely didn't answer, he was too busy tending the guylines of their emergency sails. Their squid, *Lovers Leap*, was without power, her engines disabled by a mysterious explosion only hours after they had left Skystation Seven. After that, while they were still trying to deploy the sail booms, a storm had caught them, one of the frighteningly swift upwellings of turbulence similar to a terrestrial thunderstorm, but magnified on a scale of ten. Buffeted by the violence of the wind and the lashing ribbons of acid rain, they had struggled to warp out the tiny square of reinforced nylon that was the storm sail. Somehow they had escaped into calmer airs, and swung out the booms, unfurling the main sails.

But *Lovers Leap* had gone through hell and she showed it. The radio and most of the instrument console had been torn away when the bow had gone, blasted off by a bolt of lightning. The plastic sheeting that covered the hull-framing rattled and cracked with each gust of wind. They had mobility because of the sails, but they could not communicate, and were effectively lost, for there are no landmarks in the upper atmosphere of Venus, only the endless banks of acid clouds with their pelagic crops of algae and airplants upon which the sparse human population of the planet subsisted.

"How are the tanks?" Neely asked suddenly. The gas tanks, actually bags of inflated plastic, were their lifeline, the only things keeping them aloft. It was a long fall to the surface of the planet, a surface burning hot and crushed by a monstrous weight of atmosphere. The Skystations, and the complicated artificially created flora and fauna that filled the air like flights of greenish balloons fashioned by a drug-crazed flesh-sculptor, kept to the upper limits of the atmosphere where the pressure and temperature were Earth-normal. Death waited above and below, the choice being one of ice or fire.

But Venus was far more pleasant than she had once been. The upper atmosphere held oxygen now, though the acid clouds and the great volume of the gas prevented humans from using it directly. Plastic suits and respirators were standard uniforms. The wonder was that it had all been accomplished in only two hundred years.

But neither Poulton nor Neely were worrying about their surroundings at the moment. They were tired, and they were hungry, and their supplies were somewhere below, cooking on the rocky surface, assuming they had not burned up in the descent.

"There's a clearing ahead," Poulton said suddenly, pointing.

Neely nodded, though he had already sighted the widening of the canyon. The green haze grew more dense. The sunlight was brighter

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here, and the motes of microscopic algae were flourishing.

Then a bloated, baglike thing popped abruptly into view out of a wall of cloud, and floated leisurely across, and below, the squid's course.

Poulton pulled out his scatter gun.

"Forget it, jerk," Neely snapped impatiently. "That's a Fairy Loach. You know how they taste. Hang on a few minutes and we'll find ourselves in the center of the algae drift. The hunting will be better there."

Poulton lowered the gun, but he didn't put it away. The Loach, apparently assured of its invulnerability, ignored the squid as it passed overhead, eclipsing the sun momentarily.

More shapes became visible, just as Neely had predicted. He backed off the sails and *Lovers Leap* began to lose steerageway, bobbing as the wind found no other purchase on it but the ungainly mass of its hull.

Ahead, obscured by the fog of algae, a sizeable shape emerged, moving almost parallel to their course.

"Air whale," Poulton said with satisfaction. He moved to the ragged cavity at the bow. "Swing us to port slightly," he suggested.

Neely hauled on the lines, adjusting the sails. *Lovers Leap* moved in response.

The air whale became visible.

It was about half the size of *Lovers Leap*. It was translucent, its skin a dull green, marked with scarlet blotches. Its tail was flattened into a pair of flukes, hence the name. There were no other appendages, and the closer to its head one got the less whalelike it appeared. The mouth was a net of transparent membrane held out by cartilage spines. There were no eyes, just countless light-sensitive eye-spots dotting the bulge of flesh that outlined the netlike mouth.

Neely tied down the lines, got to his feet, and grabbed for the pike-hook. He joined Poulton at the bow. The whale's blotched hide was so close now that they could make out the tiny parasitic robber plants scuttling over its flanks, trying to get out of the way of the approaching squid, their retractable roots slung over their greenish backs like strands of dead-white hair.

Poulton's scatter gun went off with a loud bang. A hail of jagged glass shards flashed from its flared muzzle and ripped through the whale. At once there came a shrill hissing and the whale began to sag in on itself, sinking. But Neely had jabbed at it with the pike as soon as the gun had gone off, and the grapples were already set. He pulled, and with Poulton's help they soon had the drooping whale aboard and lashed safely.

Poulton got out his knife and began to butcher the plant-thing with expert strokes, peeling back the hide, cutting free the deflated gas sac, exposing the rather tiny spine and rib

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section where the real meat of the animal reposed.

Neely had gone back to the sails. He let them out and allowed the squid to run before the wind. It was as good a direction as any.

Poulton gave a moan of disappointment. "Water sac is nearly dry," he lamented, showing Neely the puckered, transparent organ with its puddle of liquid left within.

"We'll find others," Neely told him. "We won't die of thirst."

Poulton went on with his work. Soon, he had a couple of steaks heating in the oven. The remainder had gone into the compact freezer-unit mounted on the keelbeam of the squid. Suddenly he laughed.

Neely glanced at him questioningly.

"I was just thinking," Poulton explained, "about Brackett and why he sent us out here. Why we haven't even found the grazing area yet, let alone this legendary creature that's been stealing the stock."

"Brackett doesn't believe in a monster. He sent us out to prove to the stockmen's guild that he's taking action to protect their interests."

"Stockmen are not exactly the most imaginative members of a Skystation's complement," Poulton said. "And something is making off with the airbeef, that Brackett can't deny."

"This is a dangerous environment," Neely answered quietly. "Might be anything. Sickness, wind, rain—it's hard to tell when the Vets can't find any bodies. Out here the dead don't wait around to be picked up for inspection."

"Well, I think it's a monster," Poulton said firmly. "After all, this entire ecosystem was created artificially through genetic engineering. When you break up gene patterns, shake them up, and put them back together to suit your own needs, you can get surprises. Just last month, on Mars, one of those monstrous earth-moving chimeras that they use in the pit-mines gave birth to a real nightmare. It ate three Vets before the mine guards flamed it down."

Neely shrugged.

The oven alarm sounded and the discussion of monsters was put aside for the more difficult task of eating. The suits had been designed for the prepackaged meals dispensed by the Skystation's supply guild. That didn't mean that the meat couldn't be consumed, it could, but the operation was difficult and messy, if not dangerous.

By the time they had finished, the sun was low on the horizon, and the cloud banks were suffused by a scarlet glow the color of freshly-spilled blood. The Venusian sunset had to be experienced to be believed.

Poulton elected to take the first watch, and relieved Neely at the guylines.

Neely checked the squid out of habit, switched on the running lights, slung his hammock and tried to sleep.

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He found it difficult. The day's events kept popping up to haunt his dreams, and more than once he struggled awake in a cold sweat, arms flailing. The sunset faded slowly. When darkness finally came it was complete, like the blackest ink.

In the final dream, Brackett was talking to them, his greasy hair coiled in ringlets about the balding dome of his head, exhorting them to slay the monster that could be seen hovering just outside the vast plastic-shielded balcony behind the Administrator's desk. It was reaching for Brackett with a Medusa's nest of tentacles that squirmed and twisted like dying snakes.

Neely sat up abruptly, and nearly tumbled from the hammock.

The squid was alone in blackness, the only light being the feeble glow of the running lights. Poulton was a hunched shadow at the bow, his helmet forming a greenish halo about his head.

Neely went forward.

"I'll take it now," he said softly.

Poulton nodded tiredly.

"Anything happen?"

Poulton shook his head no. Stood, stretched, and stumbled aft, his single goal being the hammock, and sleep.

Neely envied the other his exhaustion as he lowered himself onto the plastic deck grating. At least Poulton would be able to sleep.

Poulton had furled the mains, and was letting the outriggers carry *Lovers Leap* through the night at a steady, but slow pace. Without the radio compass there was no way to determine their heading. But the darkness did have one advantage. If there were a Skystation nearby, they would see its lights illuminating the clouds. Neely decided to try quartering.

He counted slowly to a thousand, then swung the squid to port, tacking across the wind. This was more difficult, and he counted to two thousand before swinging back. Now *Lovers Leap* was running in a long, staggered line, instead of a single narrow course.

The hours dragged past with terrible slowness. The darkness was unrelieved. Occasionally, plants impacted against the hull of the squid, or floated in through the open bow, knocking squishily against Neely. They were weak and flabby, these night things; scavengers, living off the aestivating plants that drifted with the wind, waiting for daybreak.

Neely found himself fighting the tendency to doze. Now that he could not sleep, the urge to let go was insidious in its persistence.

The blaze of light caught him by surprise.

He had been asleep, Neely was sure of that as he shook his head violently to clear it of the fog that clouded his thoughts.

The interior of *Lovers Leap* was scarlet again, but this was not sunrise. The glow crawled across the cloud ceiling, then guttered down

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into extinction. Darkness swallowed up the landscape again. Rocket flare, Neely decided, noting the direction. A shuttle must be coming in to dock with one of the stations.

He swung *Lovers Leap* about and let go the mains. The squid jumped forward, hull sheets cracking with the wind of her passage. For the first time since they had been disabled, he allowed himself a grin. There were stories of squids, and their crews, who had wandered the cloud wastes for years, becoming little better than savages, swarming aboard rescue craft like pirates to steal anything useful. That fate, at least, they had escaped.

Not quite an hour later, Poulton joined him.

Neely told him about the shuttle sighting, and explained the situation.

Poulton listened intently, gazing out into the darkness.

"Maybe I can rig some lights," he said at last. "There's a little juice left in the batteries. And we have replacement bulbs even if the searchlights did go down with the bow."

Neely told him to go ahead and turned his attention back to conning the plunging squid through the night. The two main dangers were running into a storm or crashing into an air whale.

But the night remained calm and, after a while, a dim beam of orange light sprang out through the hull of the squid.

"Best I can manage," Poulton complained. "Repaired a wind generator for the batteries, though, and they should improve with time." He swung the portable spotlight around and sent light leaping forward through the rent in the bow. Cloud mist churned furiously in its beam.

"Leave it there," Neely suggested. "And how about some more of the whale. I'm starved."

They took turns at the con as first Neely, then Poulton, ate.

Then the clouds fell away and they entered a clearing. Neely backed the sails, suddenly cautious. The caution paid off, for suddenly the beam filled with the blobby green shapes of airbeef, attracted to the glow.

Poulton pointed out a brand on the nearest.

"That's Guild beef. Looks like we found the herd by accident. Wonder where the Rounders are? They should have spotted our lights by now and gotten curious."

"This is about where I saw the shuttle flare," Neely told him. "Maybe they went back to the Skystation."

"And be fined ten days wages for abandoning the herd?" Poulton snapped. "Don't be foolish."

Neely shrugged and began to work the squid out of the herd. Poulton turned off the searchlight so that the airbeef wouldn't be attracted to it and follow them.

"What's that?" Poulton pointed toward a misty glow off to starboard, as he seized Neely's shoulder excitedly. "The Station?"

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NOTES TO A SCIENCE FICTION WRITER

BEN BOVA

Straight from the shoulder talk to the short story writer from the Editor of *Analog*

". . . in story after story I see the same basic mistakes being made, the same fundamentals of story-telling being ignored . . . simply because the writer has forgotten—or never knew—the basic principles of story-telling."

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"Must be," Neely agreed. "No other light out here, but us. And that explains where the Rounders have gone. They must be keeping the herd clear of the station."

Neely sent the squid leaping forward. *Lovers Leap* had found her way home.

The airbeef crossed their path in long streamers and clusters of individuals. The beef were just streamlined sacks of vegetable flesh, similar to the air whale in shape, though but half its size, with a long fin running down the spine to give stability.

The misty area of light was more distinct. Airbeef were thick around its perimeter.

Suddenly Poulton shouted.

Neely jumped in fright. "What's wrong with you, man?"

"Did you see that?" the other hissed. "Something grabbed a beef and squashed it flat like a bug. It looked like a snake."

Neely laughed. "No snake up here, ol' buddy. The darkness must be playing tricks with your eyes."

"Well, if that's the case, a trick's about to be played with yours. Look there!"

Just beyond the nearest airbeef a thin wisp of flesh was approaching with a snakelike motion. Quick as a flash, it whipped about the beef and squeezed. The beef's air sac let go with a bang and deflated. The snake wobbled back out of sight with its prey still clutched tightly in its grasp.

Neely shuddered as he sent *Lovers Leap* veering to one side. As soon as the sails had caught the wind, he let the mains go. The squid picked up speed.

"Flash the spot out there and see what that was," he ordered.

Poulton was already leaping to obey.

The beam stabbed out and splashed over a bulbous shape not more than fifty feet distant.

Poulton's voice was cold as he played the beam over the limits of the creature.

"I would say that whatever that is, it meets the specifications for a monster. Let's get out of here before it gets tired of playing with the beef and decides to come after bigger prey."

But Neely had already thought of that. Wrapping the guys about a beam end, he dashed forward, caught up the flying jib, which up to now had lain idle on the deck with its lines attached, and threw it out into the night. The wind caught it and blew it up so that it stretched out in front of the squid like a vast parachute striped in red and gold. Now *Lovers Leap* really began to move.

He staggered back to the lines and played their ends in his gauntleted hands like the reins of a wagon, letting them slide back and forth over the pulleys. Poulton swung the spotlight aft for an instant.

"It's coming after us," he reported grimly. "Pray we don't catch a beef in the jib."

"Gimme some light then," Neely

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snapped, straining at the lines.

They hurried along the edge of the clearing, bursting through occasional walls of cloud. In their wake came the pursuing shape, a nest of writhing tentacles dangling behind as it jetted after the squid. Ever nearer it swept, until at last, disregarding the danger, Neely swung to port, and *Lovers Leap* vanished into the dark mass of a cloud bank. At the same time Poulton extinguished the spot and the running lights.

They fled silently and blindly through the darkness, the wind whistling past the hull.

"There's something glowing behind us," Poulton hissed. "Getting nearer."

Almost as he spoke a shape decorated with bands of blue-and-red fire swept overhead, so near that both men could make out the wide steering fins at the tip of the sausage shaped tail and the gaping mouth of the main siphon as it gulped for more air. *Lovers Leap* shuddered as it was forced to brake abruptly. Neely cursed as the guylines were torn out of his grasp. An instant later the sails ripped with a screech of tortured fabric and fluttered away into the night.

They were bathed in hellish glare, while nests of snakelike arms dotted with mouth-sized suckers slashed over the hull and squirmed inside. Neely felt himself grabbed around the waist. Then he heard Poulton's scatter gun go off and the arm dropped away, its end blown to shreds. He seized the pike, jabbing at an arm that was coming up on Poulton from behind.

A gas cell went with a thunderous bang. Two arms were blown asunder by the explosion, but four more swept in to replace them. Poulton fired again, but the shot went wide, and another gas cell exploded. Now *Lovers Leap* rolled upside down. As he fell, Neely heard Poulton scream, but had no time to see why. He grabbed for an aluminum strut as he flashed past. It struck him in the chest and he clung to it tenaciously, while below, fifty miles of empty air waited to accept him into its bosom. He kicked his feet wildly, and fought for purchase. Out of the corner of his eye he saw Poulton swing past with a suckered arm entwined about his neck.

Another arm swung into view. It brushed Neely's legs, stopped and came back for another look. Neely screamed as it wound itself around him and yanked him away from the strut. As he was whirled around by the arm he found himself clinging to the greasy flesh with all his strength, more afraid of falling than he was of the monster.

An instant later he was thrust through a gaping mouth into a dimly-lit cavity congested with the squirming bodies of countless air-beef, their gas sacs crushed. The arm released him and withdrew, leaving him alone in the nightmarish pit.

Well, not quite alone—off in the distance he saw a familiar foot

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sticking out of a pile of beef bodies. He floundered over and pulled it free, discovering an unconscious Poulton attached to its other end.

He shook him awake and answered the inevitable 'what happened' question. When Poulton was briefed, he was ready to use his scatter gun on the animal right then and there. But Neely told him to wait. They had nowhere to go.

So they waited. The one consoling thought was that in their suits they were safe from the creature's stomach acids. Yet there didn't seem to be any acids. The airbeef merely squirmed about uncomfortably like a netful of sardines dumped into the hold of an ocean-going cannery.

"This is one funny beast," Poulton said aloud after a hurried examination of the interior of the gut. They were gradually being forced to one side as more and more of the airbeef were thrust into the cavity through the creature's maw. The harvesting seemed to go on and on.

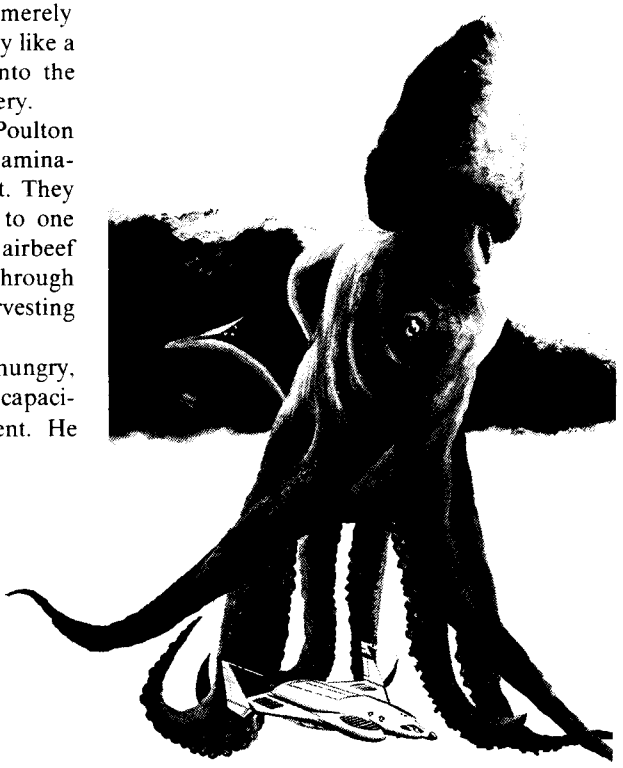
"Doesn't seem to be very hungry, although it has one hell of a capacity," Neely said in agreement. He had moved close to the inner wall of the stomach and began to examine the thick and wrinkled endoderm.

"What we need now," he said softly, "is a porthole."

With that, he began to scrape with his knife where the skin was stretched tight between the inflated ribs of two gas cells. The creature shuddered violently and both men were thrown to their knees.

"It doesn't like that at all," Poulton observed.

"Tough." Neely went back to his



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scraping. Soon he had a fist-sized hole dug through the stomach wall, and beyond it, through the transparent epidermis, he caught a fleeting glimpse of *Lovers Leap* sinking into the misty depths of the lower cloud deck, bound on her voyage to oblivion. All around, lightning was playing amid the canyons and prominences of towering clouds, painting the night with curtains of bluish fire. There might have been thunder punctuating the flashes, but Neely couldn't hear it for the shrill squealing of the crippled beef.

Poulton hammered on his shoulder.

"Hey, the harvest is over."

Sure enough, there were no more new arrivals. And even over the turmoil they could hear gas cells groaning as they filled. Somewhere in the creature's vast bulk it was converting acid mist to hydrogen.

They were rising. Despite the 'window', Neely was unable to see where they were going. It was a scary situation: trapped in the gut of some giant beast, sloshing around with hundreds of crippled airbeef. The plaintive cries of distress did nothing to lighten the mood.

Poulton seemed to be getting panicky, Neely noticed. Understandable, since they had always had some control over their situation before. Now, helpless as they were, a man might lose control.

"Let's find out just what this creature looks like from inside," Neely suggested.

"Why?" Poulton snapped. "We're out of it."

Awkwardly, Neely climbed to his feet. Example was the best persuader. But it was damnably hard to stay upright on the squirming beef. He lurched off toward the rear of the stomach, waving at Poulton to follow. At first, it seemed as though Poulton was going to stay right where he was. Then, slowly, he stood up and stumbled after Neely.

They used the stomach wall as a support. It curved, glowing faintly from the luminescent chromophores embedded within the thick tissues. Finally they came to a large sphincter, its lips puckered tightly.

"Keep out." Neely joked, running a gloved hand over the valve. "Well, I doubt there's anything back there that would interest us, anyway. Let's go forward."

They continued along the wall, following its gradual curve. Massive cords of muscle became prominent in the stomach lining. Large blood vessels throbbed like drums.

Abruptly, Neely called a halt, and pointed.

An ulcer showed its inflamed rim just above the squirming layer of beef. Neely forced the animals back and knelt to examine the wound.

"The endoderm is very thin here. I think we could force our way through."

"What for?" Poulton asked unhappily.

"Do you want to stay in the stomach?"

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Quickly Poulton shook his head no. "What do you want me to do?" he asked.

"Push with your hands when I tell you to."

Together they positioned themselves and, at Neely's command, pushed. The skin ruptured and they slid precipitously out of the stomach, along with several beef, into the body cavity of the chimera. They tumbled and rebounded off elastic bands of mesentery before coming to rest atop the broad beam of the creature's ventral notochord.

Neely was overjoyed at discovering where they were. He tugged at Poulton's arm in the shadowy dimness, and set off.

"Where are we going?" Poulton demanded. Bands of muscle made it necessary to crawl on hands and knees.

Neely didn't answer. After a moment, an answer was unnecessary, as they found themselves in a brightly-lit cave of flesh with a deathly-white tube of tissue lying in its center like some vast tree trunk.

"The central ganglion," Neely explained. "We can control the animal from here." By way of example, he floundered forward, and pressed his hands on the surface of the 'brain'. The chimera began to jump and squirm in midair as some of its vital reflexes mistriggered, or failed to respond properly.

"Can't really control it very well by pressure. All that does is deaden nerve responses. It's negative control. But I think I can rig a better method."

He took his flashlight from his belt and removed the lens cover and bulb. Then he broke the wires, and pulled them free of the housing so that they protruded from the front of the case.

"Let's see what this does," Neely said with a grin, and thrust the wires into a nodule of nerve tissue.

The chimera began to bleed off gas, sinking rapidly.

Neely turned off the current.

The sinking stopped.

"Good—now all I have to do is map out the motor area. You get up front and scratch out another window so we can see. I'm going to need some eyes."

In half an hour Neely had the chimera doing everything but sitting up and playing dead. They he did something that puzzled Poulton. He sat back, told Poulton to keep a sharp watch, and took a nap.

It was not a long nap though . . . fifteen minutes later Poulton was shouting for him to wake up. A shuttle was approaching, its running lights blinking in a peculiar pattern which the chimera seemed to recognize, for it altered course and began jetting toward the spacecraft. Its exoderm began to glow brightly in rippling rainbow patterns.

Neely was grinning again.

"I thought men might be connected with this beastie," he said lightly, peering through the small hole that Poulton had cut with his

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knife. "They're opening up the cargo door. I have a hunch that the chimera will discharge all but a small portion of its catch into the shuttle once it docks."

"Are we going to let that happen?" Poulton asked quietly.

"I should say not," Neely snapped, unlimbering his modified flashlight. He slithered back through the narrow tunnel toward the ganglion.

"Let me know how I'm doing. Call out when we're twenty feet from the shuttle. I'm going to fight this creature like it was a battlewagon."

Poulton acknowledged, and the two men waited anxiously while the squidlike chimera swam closer and closer to its unsuspecting prey.

"Now!" Poulton cried.

Neely began to brush the wire delicately across the motor nodes.

"The arms just slammed across the hatch door and its rim," Poulton called excitedly. "They're grabbing hold."

Neely caused a contraction wave.

Poulton whistled in surprise. "We just tore the cargo doors off," he said. "This baby's strong."

Neely had already guessed that. Now he sent the arms slithering aft on the shuttle and let Poulton tell him when they were attached to the atmospheric guidance wings. A few quick touches of the wire and the wings were ruined, bent into crumpled sheets of useless metal.

"Now for the crowning touch," Neely said. There was a jolt as the chimera pulled itself atop the shuttle and clung like a leech. Its arms battered at the bow, smashing in the ports there, while two long tentacles with their sucker pads were tearing inspection hatches open and darting inside to rip at fuel lines and guidance controls.

Neely was sweating furiously inside his suit. The air conditioner was whining with the overload as he darted about the ganglion, playing a destructive tune on the responsive flesh. There was so little time. If the shuttle's main rocket were activated they would be incinerated in the blast; he was trying desperately to prevent that. But his control was clumsy. He was like a newborn baby learning how to use his body.

"They're abandoning ship," Poulton shouted gleefully. "I can see the fire of their rocket packs."

Neely relaxed. "Good," he said, and caused the chimera to release the shuttle. It dropped away swiftly now, its supportive jets disabled. Powerless, uncontrolled, it fell into the cloud-wrapped night, the fitful glow of its running lights gradually fading.

"What now?" Poulton hollered.

"We follow. With luck, they'll lead us back home."

And that was just what happened. Neely caused the chimera to damp its glowing skin and, darkened, they trailed the frightened poachers. Soon, the pearly glow of a skystation began to limn the clouds and, as the poachers tried to reach the safety of an entry balcony, Neely sent the

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chimera darting forward and had the creature swallow them up. He brought the chimera, now a floating jail, close to the station and sent waves of color rippling up and down the creature's skin. A reflection in a large sheet of glass gave Poulton the feedback he needed to correct Neely's communication. Soon, the chimera's flank was glowing with a terse message to come out and help.

Squids began to dart from the hanger bays. They surrounded the chimera. Soon, it was being boarded.

EPILOGUE

Lovers Leap II swam giddily through the endless banks of cloud. Before it, the mists were thinning, and soon it entered a large clear area. A herd of airbeef was milling around within it.

Neely studied the bank of scanners. "Got some stragglers at 3 o'clock. Let's get them back with the rest of the herd."

Poulton nodded and, with judicious pats of his electro-prod, sent the chimera after the target. A few threatening sweeps of the giant arms sent the frightened beef scurrying back where they belonged.

Air Commissioner Jives nodded appreciatively. He glanced around the interior of the newly outfitted control room constructed within the head of the chimera like an artificial skull.

"The poachers were lazy," Neely told him. "They controlled their toy by a series of trained responses to a color code. It was simple. Perhaps that's why they liked it. But like most thieves, they were stupid. This creature is worth twice what they might have hoped to get for their stolen beef, no matter how high their terrestrial contacts were willing to bid for illicit meat. It's a perfect replacement for our squids. Even better, it looks like one."

The Commissioner had the answer to that. "They used the giant squid of the terrestrial oceans as their model. Apparently they had access to a clone."

"What will happen to them?" Poulton asked.

The Commissioner became serious.

"Brackett and the others were found guilty of grand larceny and attempting to export unregistered beef. The judgment was ten years indentured servitude to the Venusian World State. Due to the specialized nature of their knowledge we decided to put them to work creating more of these creatures. By the time their sentences have been served I would guess that they will be very sick of the sight of squids and airbeef."

Poulton and Neely looked at each other and grinned.

Meanwhile, *Lovers Leap II* swung about and darted into a bank of clouds, going home, her maiden voyage a monstrous success. ■

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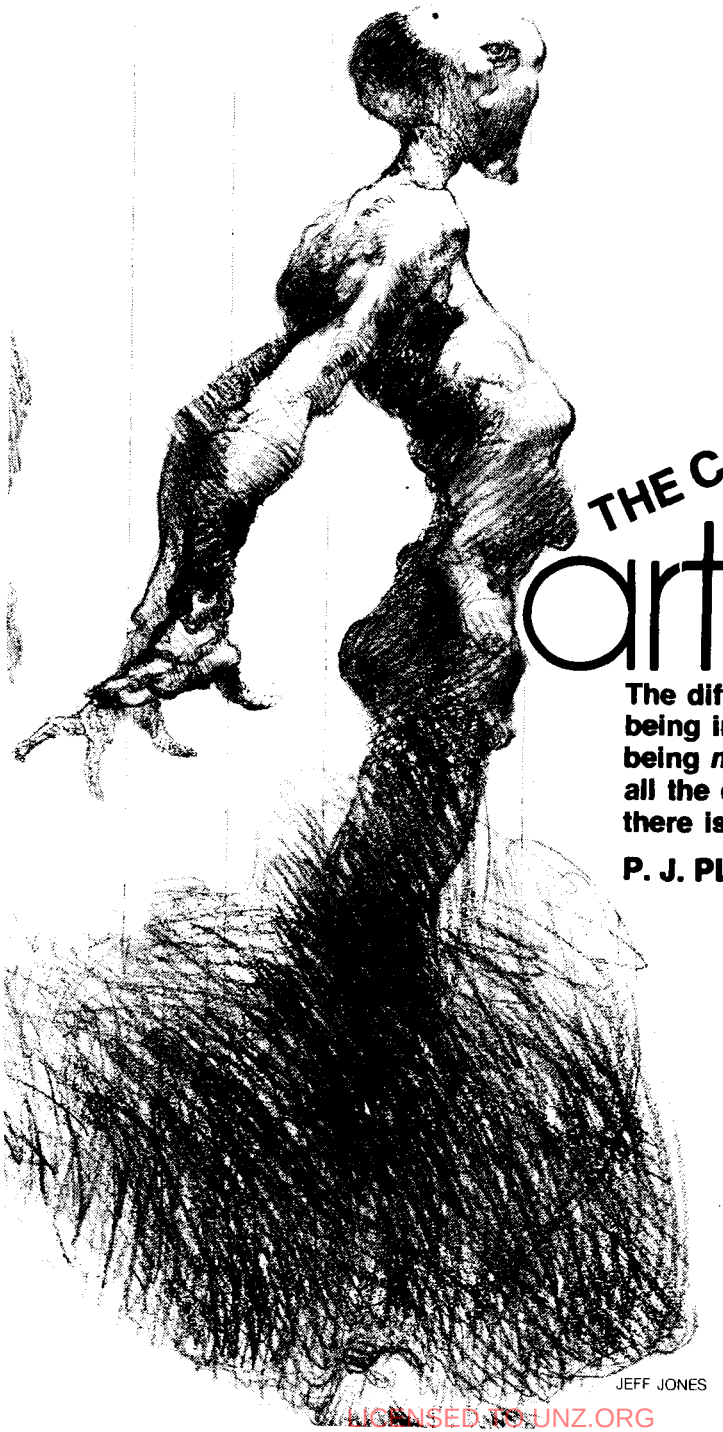

THE CON artist

The difference between being immortal or being *nearly* immortal is all the difference there is.

P. J. PLAUGER

JEFF JONES

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He just sat there.

I was writing a letter when the receptionist showed up with him, you see, and I didn't want to break off in the middle. Sure, it was a little rude, even in these callous times, but I think subconsciously I meant to test him from the start. He had been among the Immortals for so long. Anyway, I didn't hang up the typewriter as perhaps I should, but nodded him toward a chair and offered a wave of thanks to the receptionist in trade for his boyish grin.

I must have muttered into that machine for another fifteen minutes. And he just sat there.

Not impatiently. Nary a fidget. Not resignedly. Thomas Marshall Calloway was not one to knuckle under to any bureaucrat, no matter how much he may have changed over the years (so many years!) since we had been in school together. And I was the last woman who could play bureaucrat with Tommy. Not dear, sweet, charming, silver-tongued Tommy.

Which, of course, was why I had summoned him.

But you'd think he'd be a little more animated in his greeting, a little impatient to trade Hellos and Have You Seens. There are so few of us left, however well-preserved, and so many of those Young Ones. Each reunion has the savor of stolen goods, another unexpected little victory over death. If Calloway had ever felt that way before, it didn't show.

He could well have been angry. I'd invoked the secret names of several powerful divinities to get him yanked off an important project, one he'd devoted eleven years of his life to, and had him shipped pell-mell up to L5. Two days earlier, he was broiling in the sun on the outskirts of Paramaribo with sundry Immortals; now here he was in Watson with scarcely a word of explanation to help him interpolate between two scenes a quarter of a million miles apart.

If it were me, I'd be kicking doors and shins.

If it were me, I'd at least be doing my waiting outside. Anyone cooped up on Earth for any amount of time ought to be going ape over the fresh air and open expanses of Watson. Or so it is with us Trojans. But then I guess people from Earth don't see it that way. Or maybe Surinam is just less crowded than New York.

Still, it was Calloway's first visit to the Lagrangians, and he was as curious a creature as any I'd ever met. If nothing else I expected to catch him looking out the window. Which is why I was so bugged by his Buddha-like serenity. Had he been among the Immortals so long he'd forgotten his own origins? (More important, had he forgotten his destiny?) I needed someone who knew Death intimately enough to fight Him to a draw, not some angel in waiting.

There was no point in delaying any longer. I told the typewriter what it could do with the letter and fed it

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its microphone by way of example. I made a few fussy change-of-subject gestures and nailed Calloway with my patented smile.

"So, Tommy, you're looking well." The height of inanity. Who doesn't look well? They had stopped him at fifty-five, then backed him up to about forty, same as me. I ended up looking matronly, he looked like a curly-haired demigod. "How long has it been?"

"Thirty-seven years," he replied with uncomfortable precision. The voice was as liquid as ever, even when devoid of emotion. "You and George invited me to Cindy's wedding, remember?" My mind shied away from daughters and weddings. They reminded me too forcibly that I had great-grandchildren drifting inexorably into puberty. It was enough to make me feel old.

"How the time flies." *Inane, inane.* "I guess we've all been busy. How's your work coming?"

A hint of emotion. "All right, until you dragged me up here, Margo." Somehow, my name always sounds brighter when he says it. My mind was still out of gear.

"Aren't you curious about why you're here?" It was a pretty weak counter.

"You'll tell me, as soon as you get over your customary dither." (Did he know I still had a crush on him? *How could he*?) "I'm sure it's important and it involves the Immortals." That was an easy one.

He crossed his legs and allowed the brief, lazy smile to fade. "I'm sorry about George."

That hurt, but it left me feeling relieved. It meant he was still in touch with reality. And he knew, with the deep sympathy of an old friend, how George's death still affected me. (Why did he have to die, when we're so close to the ultimate answer?)

I unbent and touched his hand. "Thanks." I waited for the lump in my throat to dissolve. Tommy sat there, patient as ever.

"You're right," I began, "we have another Immortal. It assumed Earth orbit about a month ago."

"Only one? Must be a Mergansser."

"No."

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"Curious. Others usually travel in bunches. What is it then? T'reel? Sissel One? Makkakkakee?" Only a South African could match those deep glottal clicks. A con artist knows how people appreciate hearing their names pronounced properly.

"None of the above. We've got a new one on our hands."

I pulled the recordings out of a desk drawer. Almost lost a finger as Tommy snatched them from me. At least I didn't have to worry about holding his interest.

"Mm, bipedal," he murmured at length. To this day, I have no idea why that struck him as important. But then he was the expert on Immortals. "Who's this Flanagan?" He jabbed at a cross-reference showing pale blue in one corner of the screen.

"First Contact Officer on the *J. W. Campbell*." At least he asked me a question I could answer. "Lieutenant Flanagan is credited with avoiding an Incident. She recognized the Immortal's attempt to communicate and convinced her captain that the intruder was not ignoring a challenge."

"Lucky for the captain."

"Yes." Neither of us had to dwell on that. Most of our other first contacts were pretty bloody, at least for us. You can forget about the noble Contact Ceremonies you saw on TV; they weren't staged until *after* we had learned our lessons.

"So this, uh, Gwerb," he got the twisty vowel sound almost dead on, "this Gwerb doesn't speak Lingua Franca?"

"That's a curious thing," I said with a frown. "It turns out that it *did* speak trade language, once Flanagan secured an audience with it. For some reason, it chose not to use the standard greeting on entering the system." I shrugged Italian. Immortals always raised more questions than they answered.

I decided to try out a pet theory of my own. "Do you suppose it picked up the language from Flanagan?"

He killed the theory with a quick headshake. "No, telepathy doesn't work like that. It's a big help in learning a language, but it can't grab deep patterns that fast."

"I don't see why not," I persisted.

He thought about it for a long minute, which made me feel good. But then he shook his curly head again.

"No. The processing capacity just isn't there, not in any of the Immortals I know and not in this one, from the looks of it. They're all just evolved animals, like us, not machines."

I shrugged British and shut up.

Tommy pulled out a pad and began making notes. I watched with interest as he laid out a grid and began filling in the squares by picking data out of the recordings I had given him. It was reassuring to see him attack that random heap of observations so methodically.

But over half the squares were still

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empty when he looked up.

"So when is our friend going to join its brethren down at Paramaribo?" Tommy asked. "Or does it know about them?"

"It seems to." I hesitated. "That is, it was told about them and didn't act surprised. Or very interested for that matter. We're pretty sure it plans to stay in orbit, though, because of another thing it said."

I looked Tommy square in the eye.

"It wants to take over the Earth," I said flatly. "All of it."

Tommy looked unimpressed.

"So do the Sissel Ones. They'll have to argue it out among themselves."

"Tommy, it really means it! There's no mistaking what it's told us."

"The Sissel Ones really mean it, too," he replied unperturbed. "The Earth is a right nice place to live.

"But you've got to understand the perspective of an Immortal," he continued. "Sure, they could kick us out, but why bother? Another few thousand years or so and human beings will likely be gone anyway. If we don't kill each other off, we might find someplace *we* like better and go there. Or the climate may shift and force us to move out."

He leaned back in his chair.

"In any case, what's the hurry? If the Immortals feel pressured by anything, it's the steady increase in entropy, and they've got *billions* of years to decide what to do about that. Why sweat a few millennia waiting for a race to get out of the way? That's the line of least resistance."

My worries were coming back again. Maybe Tommy had been among the Immortals too long, after all.

"Look, if we thought that was all there was to it, I would have mailed you a letter, not dragged you up to Watson, chop-chop. This dude means business, and it's not going to wait for nature to take its course."

It was time to hit him with the melodrama. "The Gwerb is going to cancel the Earth's magnetic field."

I let that sink in.

So ludicrous, yet so frightening. Without her magnetic bumper, our beautiful home planet would be at the mercy of solar wind and cosmic ray. Many times have her rocks recorded reversals, and thus temporary cancellations, of that protective field; as many times have her land species recorded sudden upsurges in mutation rate. And extinction.

We know another shift must come in time, we've known it for decades. But we always assumed that there would be enough time for us to get ready, that our race would have at least a few more centuries in the cradle. It was not to be, and we weren't ready.

"Did it say when? Next week, next year?" Still no concern in that liquid voice.

"It's already begun, as far as we can tell." I pulled out more records,

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this time from the left hand drawer. My work drawer.

"See, here," I indicated, "and here. It doesn't take a multipole expansion of that perturbation to see what's going on. There's a tremendous dipole field being induced that's almost exactly opposed to the Earth's field."

"Not very big," he muttered at length. "A few parts in ten to the fourth."

"Would you care to compute how much energy it takes to build a field like that?" I was getting annoyed. He should have been more impressed. "And that's just the first five weeks."

"How does it do it?" Bland curiosity.

"Damfino. Mental energy, it says. It's my job to find out." I waved my arms helplessly. "I thought I was a good physicist. I thought I knew every trick you could play with Maxwell's field equations, but this is something completely new.

"It would be fascinating, if it weren't so urgent. We need time."

"And you want me to buy that time for you?"

"Yes. Or talk the Gwerb out of this whole thing completely."

"It reads minds."

"I know."

"It's impervious to threats."

"Yes."

"And you expect me to con it into doing something it doesn't want to do when all along it can read my every motive."

"Yes, that's what I expect."

"You don't ask much, do you?"

I stared at him levelly.

"I can only work on one impossible problem at a time. The extras I delegate."

Tommy looked at his half-completed scorecard.

"How long will it take for the Earth's field to go to zero, at the present rate?"

"About fifty years."

"Then I guess I have a little leeway." He sat back. "Maybe you should have written that letter, after all."

"No." Flatly. "You asked the wrong question. What you should have asked was how long until we reach the point of no return? There are powerful regenerative effects in the core, don't forget."

"Okay, then, how long?"

"About five months."

It was less than a mile to the shuttle depot—my office is on Noon Avenue, near April, the station we wanted was at Ten Thirty and June—so we walked. Trojans walk everywhere in Watson, but we're considerate of visitors. Thus the tubes. The day was too delicious to hide from, however, and I love showing off Watson besides.

A storm was brewing. You could still see through the cloud core, the other side hanging like a fairyland beyond the mist, but it was thickening up fast. Lightning was playing way down near December cap,

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where the rain always begins, so we were not likely to get wet. The air was electric with ozone.

Marianne Rodriguez must be doing the weather this month; that was her kind of storm. (I hate to let my prejudices show, but I've always felt that the men handle spring weather poorly by comparison. Too mawkish and sentimental.) But the high ozone level was a new touch, even for her. Physical Plant was probably sweating bullets over the air balance.

To me, it was a relief. I was ovulating—for some reason I thought I could handle Tommy better if I went off the hormones for a spell—and the stress from our interview was still with me. My skin almost crackled as the storm drew tension from my body.

Tommy was lapping it up, too, I could tell. He was decent enough not to ask for all the technical details, unlike most tourists from Earth. (How fast does Watson rotate? How many cubic meters? How do you make the lightning and rain? It's like dissecting a kitten.) Tommy simply enjoyed.

We reached the depot simultaneously with the front, dashing the last fifty yards against large pelting raindrops. I love the ancient white globes, and the green paint, and the weathered sign that misadvises, "IND—Downtown." It was worth every penny of the freight. Even the iron railings.

The huge minute hand of January inertial clock was just reaching Time Square as we dropped below ground, which gave us five minutes to spare. Our shuttle was scheduled for release right after the regular departure for LBJ. We waited as half a dozen people climbed down into the shuttle and the hatch clanged shut.

The attendant watched the second hand of yet another inertial clock on his console (the gadgets are ubiquitous—I'm glad I held out for a period of exactly sixty seconds back when Watson was being designed), and stood poised at the manual trip as the red mark approached. Of course the automatics worked properly, as they always do, and the shuttle released right on the mark.

Then it was our turn, and suddenly it was no longer a matter of academic interest. We were climbing down through the outer skin of Watson, nothing but a flimsy shuttle beneath us. With morbid intensity I studied the docking collar as I passed it, looking for gaps or signs of weakness. Then we were outside the protection of Watson, dependent upon a toy rocket ship for our continued survival.

I smiled reassuringly at Tommy. Did a rotten job of it. We strapped in and the hatch clanged shut behind us.

It has always annoyed me that shuttle passengers get no warning of release. It's bad enough that there's no visible control console. (Yes, I know there's one under those cushions over there; but that's just for emergencies, and there's damned

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little you can do with an underpowered tin can a quarter of a million miles from home.) They could at least provide a taped countdown.

We lurched free of Watson and began our long fall. Once we were underway, everything was all right again, so I unzipped and swam over to check on Tommy. Weightlessness I love; it's those damned launches that bug me.

Tommy was a little green around the edges, but adapting fast. I cleared a port and began making like a tour guide to take his mind off his stomach.

"That's Watson, back there," I pointed at the enormous cylinder drifting away from us, "and up ahead is her companion, Johnson. The connection is at the far end, away from the sun. Aren't the mirrors pretty? Like giant flower petals."

A twinkle caught my eye. "Look, there's the shuttle that left ahead of us, heading for LBJ." At any given time, there are probably three shuttles in transit between the government and private sectors, but it's rare that you see another. Of course our departure was unusual.

"Where's the Gwerb's ship?" Tommy asked, despite his pallor.

"About an hour beyond LBJ, at the moment. It gets as much as three hours away, sometimes." Orbits around the Lagrangian points can get a little complicated.

Tommy looked relieved that our trip would be on the short side. He wasn't enjoying free fall. Some do, some don't.

He looked like he'd reached equilibrium, so I left him alone. I can hang for hours staring at the Earth. The moon is a lot bigger from here, naturally, but it's drab by comparison. Once you get used to the new face it presents from this side, your interest pales quickly. Earth, now, is home.

We're self-sufficient, in an economic or strictly technical sense, and have been for several years; but Watson and all the outer colonies would never survive without old mother Earth. We need her high technology, we need her gene pool. Most of all we need her presence. Sure, I make a lot of Jingoistic noises about the advantages of orbital life, but I'm not ready to give up the *option* of going back where I came from.

We had to stop this creature who threatened our home.

The *Campbell* loomed up on schedule and its snatcher nabbed us and snubbed us neatly. It wasn't as smooth as the tangential dock at LBJ, but then it couldn't work with the same velocity match as between cylinders. A tug pushed us over to the alien ship and latched us to the adapter installed there.

Suddenly, we had gravity again. Not much, for it was a smallish ship and the spin was kept slow to facilitate docking, but enough to define a "down" and provide some traction. It was enough to relieve Tommy's

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preoccupation, too, which in turn relieved mine. I wanted him working at full capacity.

There was an annunciator inside the tiny lock, which signaled "proceed." Tommy addressed it in Lingua Franca.

"Immortal One, two Ephemerals would enter your presence." There was a ritual tone to his incantation which they forgot to include in my study course. It sounded a lot less silly that way.

The proceed light went out and we waited. We had food and water for two weeks, the *Campbell* would send over air if we needed it. When you deal with Immortals, it pays to cultivate patience, and to be prepared for long waits. Still, I crossed my fingers and hoped for a quick response.

It came in less than an hour. Without any preliminaries, a two-tone voice said "Enter." I used to own a Fiat with an air horn that sounded like that. Only saucier. A hatch door chunked and edged open invitingly.

We made our way along the axis of the ship, past sealed hatches of various shapes, to a room nearest the widest part. We entered the room and halted.

The Gwerb stood by the opposite wall, perhaps eight meters away, which was covered with displays and controls. Multicolored lights played across the wall, communicating a sense of powerful machinery held in check. Something resembling a podium stood nearer the center of the room, with about four meters of no-man's-land in front of it. Our end was clearly intended for visitors (perhaps supplicants is a better word).

I felt very vulnerable.

The Gwerb was obviously an animal, and obviously male (with no nudity taboos, from what I could see). It had the oversized sex organs which seem to characterize most of the intelligent species we've encountered (another data point for the Dirty Old Man theory of evolution). It was unmistakably not human.

I still don't fully understand why we persist in using the neutral pronoun when we refer to Immortals, for they very definitely have distinguishable sexes (except for the Sissel Ones, of course, who are exceptions to *everything*), but I understand the feeling. Anything that can last forever is much more of an individual *it* than it is half of a couple or part of a race. It's scary, like contemplating the Universe, so we neuter them in our speech and try to cope.

Tommy made a graceful bow; I followed his lead clumsily. The Gwerb stood impassively by his flashing control panel.

"One of you may approach," it said abruptly, and stepped forward to the podium. Biped or no, its limbs bent in all the wrong places.

Tommy took his cue and advanced into no-man's-land. For a brief instant he shimmered, and suddenly I understood the setup. My feeling of vulnerability was caused by all those tiny muzzles pointing at me from

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walls and ceiling. (I must have noted them subconsciously without being aware consciously of what they were.) Some barely discernible barrier, only now relaxed for Tommy, penned me in before that unknown menace.

But then Tommy went into his act and I forgot about everything else, personal safety included.

He talked, he did. My, how he talked. Banter and stories and blatant flattery mingled with pure vaudeville. He produced a glass sphere which boiled in his hands to reveal a tiny Swiss village in the midst of a mini-snowstorm. (That was mine! He'd filched it from my desk.) Flakes settled in slow motion as he spun a tale from Hans Christian Andersen.

He flashed artificial diamonds and talked of fusion generators, displaying more technical knowledge of a difficult subject than most power engineers I know. He told a string of dirty jokes.

He even sang a song.

Before I knew it, the Gwerb was asking questions. Tommy twisted the Q and A format into a dialog, and then snuck in a couple of questions himself. In the next hour he pumped that alien for more hard dope than the Contact Team had gleaned in a month-and-a-half.

And he made friends with it in the bargain.

We left the Immortal's presence with a promise to return the next day. With a catcher's mitt and a barbecue grill. And fifty more glass spheres.

I felt so warm and hopeful that I didn't mind the undocking or the snap back toward Watson. It was really a shock to find Tommy in a cold sweat, and not from motion sickness. "Why, Tommy, what's the matter? Everything went great, didn't it?"

"Oh sure, fine," he said without much assurance. "The court jester routine is a surefire icebreaker. One thing Immortals do not like is being bored; they've seen everything a thousand times and don't need to see it again. If you start out predictable—awestruck, pleading, threatening—they're likely to cut things short and dump you. Getting a second interview can take maybe another hundred years."

"But you did it! You got through."

"Yeah, I know." He shook his head, puzzled. "But this one's different from all the others. Did you see those weapons?" I nodded, mutely.

"Such an open show of force. Makes my skin crawl. Not even the T'reel are that overt."

I understood what he meant. Being around an Immortal means living within an instant of violent death. If one of them even *suspects* that you might want to harm it, wham! (And who wouldn't harbor nasty thoughts about such a high-handed bunch?) Reminders were plain bad taste.

"And did you notice the console?" he continued.

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"How could you miss it?"

"That's not what I mean. Flanagan's report says it buzzed and flashed like a pinball machine. Real showy. I found it gaudy, at first, but on reflection it seemed pretty tame. I think maybe it quieted down while we were there."

"Impressing the natives, do you think?"

"Perhaps, but why bother? It *is* an Immortal, after all."

"But a different kind than you're used to. You just said so yourself." I looked at him closely. "You're not going to be another one of those experts who only looks for what he expects to find, are you? I had greater hopes for you than that."

His smile had the right tinge of the sardonic. "I'll try not to be."

"That's better." I looked out the port. Watson was getting close. "Okay, what happens next?"

"I go back tomorrow with all the toys I promised and try to find one that will catch its fancy—hopefully to the exclusion of world-wrecking."

"And when that begins to pall?"

"I'll find something else."

"I'm sorry to have to use you this way." I put my hand on his arm. "It's too bad you have to play the clown."

His eyes blazed. "What the hell do you think I've been doing for the past eleven years? Okay, so they're Immortal and we're not, but it won't always be that way. We're getting closer every day. Maybe we'll make it on our own, maybe I'll be the one to trick the secret out of one of them.

"But you can bet I'll stand on my goddam ear and sing 'Jingle Bells' if that's what it takes to beat the bastards!"

His intensity was overwhelming. I should have realized how he must feel. We forget that others have their motivations for hanging on, drives that must be at least as strong as our own. Me, I had the memory of George, and the promise he extracted from me before he died. One of us must live to smell roses and fight entropy.

And if we win this skirmish, I swear I will.

It was nearly a year before I spoke with Tommy again at any length. This time I didn't keep him waiting after he came into my office.

"You're getting expensive," I said.

"I'm getting results." Simply.

"Can't you interest the Gwerb in burning marshmallows instead of diamonds? DeBeers is getting more than a little restless at the drain on the profits."

"There won't be any market for diamonds at all if our friend isn't kept occupied."

"But burning diamonds?" I was accustomed to seeing government waste on a colossal scale, and with the grant-hungry eyes of an academic, but this overwhelmed even my jaded senses. On my desk was a requisition for an additional three

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billion dollars in top-quality stones. I hadn't seen that many zeros after a dollar sign since the Deflation.

"It's that or mercury 196."

I winced. That particular isotope was only 0.146 percent abundant. It was costing us a mint to separate out enough to keep the Gwerb happy. (What did it do with it, anyway?) There simply weren't any isotope separation facilities to spare for more.

"Look, Tommy, I know you've done a helluva job, and we all appreciate it. But we're starting to feel a real pinch. It won't take much more to trigger a depression. Then we're all out of luck."

It was no exaggeration. We had so much tied up in medicine, keeping people alive and making them whole, that there was nothing to spare. And we still hadn't brought the birthrate under control. Not even the giants like IBM and Uncle Sam could survive the traumatic rearrangement of wealth a depression would bring. It could even mean an end to Watson.

"How's your work coming?" There was no malice in the question, though there could well have been. Tommy had bought me a year so far and I still hadn't come through.

"I know how to build up a one percent counter-field, now. It's a clever bit of jiujitsu that occurred to me about four months ago. I thought we had it licked then."

"That was when the Gwerb's field was at its strongest?"

"Yes, about seven-tenths of a percent." I sighed. "But that can't be the method it's using."

"Why not?"

"One percent's the best you can do. The Gwerb is intent on knocking out the field completely, not just denting it."

"Well, at least that's something." His effort to sound reassuring made me feel even worse. I was getting desperate.

"Tell me, now that you've studied the ship for a year, do you know of any weak spots in its defense? Do you think we might knock it out?"

His head was shaking violently. "Never."

"Why not?" Desperation tinged with petulance.

"Because it's an Immortal. Do you know what that means?"

"Tell me."

"It's all the difference in the world between them and us. Look at us! We've licked disease, aging, we're learning how to regrow limbs and organs. But still, every year, thousands upon thousands of human beings lose their lives. Why?"

It was almost a shout.

I shrugged helplessly. "I don't know. Accidents, gunshot wounds, I suppose." And an occasional rare disease. Poor George!

"Exactly. And there is the fundamental difference: with proper caution, we do not die; *but they cannot be killed.*"

He shifted gears.

"What are the classic elements of a

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murder?" It was a rhetorical question—he struck the answers off on the fingers of one hand. "Motive, method, and opportunity. The Immortals are telepathic, they can smell malice two counties over. So much for motive. And they're a cautious lot—they provide damned few opportunities for mayhem to begin with.

"That leaves method. Somehow, all the Immortal races have developed a form of telekinesis that is brutally effective. The greater the personal danger, the more deeply they can draw on this ability. It's their ultimate counter to any stroke."

He leaned forward, nailed me with his gaze.

"One of the T'reel told me of a visit they made to Epsilon Eridani two millennia ago. They had made friends with the intelligent race there, and received an open welcome when they radioed their intention to land.

"The planet was being blockaded by a dissident faction who had established bases on the inner moons. The dissidents ambushed the T'reel as they came down, with atomics, lasers, everything. You can imagine the outcome."

"No more bases?" I ventured. I knew the T'reel could be nasty.

He looked at me funny, as if I hadn't even been listening.

"No more moons."

I began to get the idea.

"Anyway, we know now that that T'reel wasn't just spinning a yarn. We've demonstrated the telekinetic effect they seem to use, though on a much smaller scale of course, in the lab."

This was news to me.

"You mean human beings have this ability too?"

"Not quite. I filched a machine from the T'reel which they evidently use to augment their natural ability. Only our better espers could make it perform."

"So we still have to solve the telepathy problem."

"Of course. No matter what. That's the 'motive' part. And even then we would need machine assistance to counter 'method' like a true Immortal. But if we can master our telepathic ability, and understand the T'reel device, we have a chance."

I pondered the implications of this marvelous news. I didn't know we were that close.

"But will the Immortals accept us, with mechanical aids? It's not really the same as evolution."

"I think they will," he said tentatively. "Not that it matters, for they don't seem to help each other much, but I think they will. I strongly suspect that more than one race got started in the immortality business with a little technical assistance."

"Maybe." A thought struck me. "Say, won't your friends in Surinam help us against the Gwerb? He's causing them grief as well as us."

"They're not my friends." Stiffly. "And they don't seem to much care what happens to the Earth. Not even the Sissel Ones. I think they're

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watching us, to see if we can cope."

"Can we?"

"Get me those diamonds and we can, for another few months." Stiffer still.

"There has to be another answer. We can't go on like this much longer." I was getting exasperated.

"Then why don't *you* talk to the Gwerb?"

"Maybe I should."

"All right then."

I was sorry almost as soon as I said those words. I was in no position to criticize, not after the rotten job I had been doing. We were both tired and snappish.

But the words were spoken. I would have to face the Immortal once more.

"We'll leave tomorrow at nine."

The child sat beneath the tree with her hands folded neatly on her lap. Tommy Calloway sat before her, talking intently, oblivious to the world around him. He didn't look up until I was almost next to him.

"Hello, Melissa. Tommy."

"Hi, Ms. Dixon," the girl piped cheerfully. "I like your friend."

"I'm glad to hear that." Then, to Tommy, "I waited at the depot for over an hour. What happened to you?"

He glanced at his watch. "Good heavens. Have we been talking that long?" He scrambled to his feet, unbent stiffly. "I guess we have. Sorry."

That old out-of-focus look was back. It bothered me.

"Come along. We still have a window for the transfer." I wanted to get it over with. But Tommy was shuffling along slowly, thoughtfully.

"Interesting child, that Melissa," he said at length. "She has a refreshingly different viewpoint. Innocent, I suppose."

That was the last term I would use to describe Melissa. Different, yes. Innocent, no. It had been a long time since Tommy had talked with any children. It showed.

"Melissa is our perennial child," I told him. "She volunteered for the Rutledge treatment eight years ago. They've kept her biological age fixed at ten years ever since."

His eyebrows elevated. "Her parents didn't mind?"

"Her parents were killed in a plane crash just before they were due to emigrate. We didn't have the heart to turn her away. And the psychiatrists thought it might actually help her with her problems if puberty were delayed.

"She has a fear of growing old that's morbid even by today's standards."

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"I see," he said, and maybe he did. I liked Melissa, problems or no. She's the only one of the Young Ones I've met who doesn't take eventual immortality for granted. (Those of us who grew up expecting to die will never fully understand our children, nor vice versa, I'm afraid.) Melissa gives me faith that the human race is worth preserving.

"What does she do?" Tommy asked. In Watson, everybody works. We mean it when we say, 'We have no housewives.' "

"Well, her parents were looking for natural immortals among humans, much the way the psi people hunt for espers. You know, try to guess their protective coloration, what sort of trail they might leave in the records. Melissa is continuing the search."

"Any luck?"

"Nothing very convincing so far."

He ruminated.

"She lives alone?"

"No, Woody Smith took her in. He's been helping her sort through her parents' records."

"Woody Smith, huh? So that old bastard is still kicking around." It was the nearest thing to sentiment I'd heard out of Tommy in a long while.

And I'd always thought that Smith was one of the Young Ones.

We entered the depot and checked in with the dispatcher. Ten minutes to wait. Tommy was still off somewhere.

"You know," he said suddenly, "if I were an immortal human I'd want to live in Watson or LBJ. You might suggest to Woody or Melissa that they take a close look at the immigration roster."

"That's not a bad idea. I'll pass it along."

He went silent on me again.

The attendant was preparing our shuttle when Tommy came out of his fog.

"Look, Margo, I'd like to postpone our visit to the Gwerb. For, say, about twenty-four hours." He had gone from pensive to impatient in those two sentences. It looked like he'd finally hit on something.

"Okay," I said, relieved at the postponement, "twenty-four hours."

He was gone before I'd finished speaking.

Tommy was there, right on time, the next morning. Piled about him was the damnedest assortment of boxes I had seen yet.

"Are you going to teach it to play the violin, now?" I asked, pointing to the only shape I recognized.

"Maybe." He rubbed his hands briskly. "Shall we get this stuff aboard?"

"Going back to fun and games, Tommy?"

"Not me, you. It's time you learned the fine art of truckling to Immortals." His grin was boyish.

"Me?" It came out as a squeak. "Look, Tommy, I'm sorry about what I said the other day. If you have any new ideas I think it would be

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better if you went yourself . . ."

"Nonsense. You said you wanted to help and now I'm counting on it. Come on." He winked, gestured a lewd invitation toward the shuttle.

What could I do?

Tommy was silent until after the launch, then burst into a rapid-fire review of the protocol to be followed with the Gwerb. How to approach, take leave, the proper method of proferring gifts. So much detail from a year of meetings!

Somehow I crammed it all in by the time we docked.

"Immortal One, an ephemeral would enter your presence." I even remembered the ritual tone.

The Gwerb only kept me waiting twenty minutes; it must have been starved for company. Tommy dug out a hatbox, the violin, and a few smaller packages.

"Here. The big box is a pair of shoes I had made to order for the Gwerb. Let it try them first—I'll be interested in its reaction to them. Just dump the other stuff in the usual place."

He loaded me up and helped me through the hatch. "G'luck, Margo." A swift peck on the cheek.

I was on my own.

Entering the big room was harder than the first time, and not just because of the packages. I kept going over all the things I had to do, so as not to cause offense. That was the last thing I wanted to do.

If the Gwerb were surprised that I came instead of Tommy, it didn't show it. It stood by the console, as was its custom, and checked out me and my packages. ("Any power source big enough to drive a laser will send the Gwerb into conniptions.") Presumably, it was also checking my state of mind. I thought I could feel crawly things at the edges of my brain. ("Don't worry about squeamish reactions, you can't feel telepathy at work.")

"You may approach," it said and moved to the podium.

I brushed through the field ("It will tickle.") and stood where Tommy had on our first encounter. No-man's -land was now awash with the junk of numerous visits.

"What do you bring me, Margo, friend of Tommy?" it hooted in that air-horn voice. I stammered—it had used up my opening sentence, the only one I'd worked out.

"You needn't be nervous," it added. "I will not pry beneath your surface thoughts."

Which, of course, was exactly what I was worrying about at that instant. If the Gwerb had intended to console me, it certainly took the wrong tack.

"I—I brought you the pair of shoes you requested." I felt like a five-year-old, on stage for the first time. "Here," I pushed the hatbox forward, losing control of two smaller boxes. They drifted to the floor amid the prevailing confusion.

The Gwerb made no move to accept the gift, which reminded me of protocol. I unloaded my arms into

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a convenient pile and stepped forward with the hatbox, placing it before the podium.

Then I moved well back.

The Gwerb bent *around* its podium (I had forgotten about its unusual joints) and picked up the box. Sure enough, there was a pair of shoes inside. Well, moccasins, maybe—there was considerable flap to compensate for uncertainties in bone structure, and long laces to take up the slack.

I started to tell the Gwerb how to put them on, but it picked the steps right out of my head as fast as I envisioned them. Maybe I couldn't feel anything, but it gave me the crawlies all the same.

It stood up, took a tentative step or two.

"Interesting." Another few steps. "You wear such things all the time?"

"Uh—yes." At last I would be allowed to speak. "We find that they protect the feet and keep the legs from getting tired. You see . . ." I broke off. Something was happening to the Gwerb.

It looked down at its new shoes in what I took to be astonishment. A thin tendril of smoke wafted up from its right sole. I caught the smell of gunpowder.

It let out a yell and began a frantic dance, simultaneously trying to unlace the elaborate thong-binding. It made noises like a Roman traffic jam.

I was terrified. All I could think of were those moons that no longer circled a planet near Epsilon Eridani, and how long it would be before I joined them. Wherever they are.

There was no conceivable reason why Tommy should have put me in such danger. "I'll be interested in its reaction," he had said, and now I understood the freight of meaning in his tone.

But to give an Immortal a hotfoot!

The Gwerb had freed itself from the infernal shoe and was hastily shedding its brother. It seemed not to have suffered any serious harm. And I was still here.

"I must apologize, Immortal One," I stammered, half-fearing to draw attention to myself. "I cannot understand why my, uh, colleague would commit such a, uh . . ."

"Practical joke?" It snared the term lurking in a dark corner of my mind.

"Uh, yes."

"I do not understand this concept—practical joke." It's voice resounded with two-tone menace.

"Nor do we, always. I can't . . ." I suddenly recalled an image of Tommy Calloway climbing the campus water-tower to dump fluorescein in the supply. The entire student body was pissing green in time for St. Patrick's Day. I had forgotten his Puckish humor. "Perhaps my colleague has been working too hard. Yes, that's it. It must be the strain."

The alien stood silent, contemplating the cast-off shoe.

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"Or perhaps it was a test," it said. "Yes." Then it laughed. I took it to be an ugly laugh.

"Very well. Our interview is at an end." It drew itself erect. "You can tell your friend that he can come in person, if he wishes to test me further."

"I'm sure he'll want to apologize to you," I put in hastily. "I'm sure . . ."

"Tell him."

And that was that. Somehow, I got the departure protocol straight, or near enough, and got the hell out of that room. I was shaking, with relief or fear, I don't know which. I was ready to land on Tommy with nails bared.

He looked up with polite interest as I dropped into the shuttle.

"You could have gotten me killed!"

He made an offhand gesture. "You're still alive."

"No thanks to you. I have seen incredible stunts before but that one is easily the most . . ." It was a bad day for finishing sentences; I was fresh out of superlatives.

"I take it the hotfoot was duly delivered."

I sputtered. "What in seven hells do you think I'm talking about? Of course it was!"

"Did you ever expect to get that close to an Immortal with something that would harm it?" he inquired mildly.

It stopped me cold.

"Why, no." Then, "All right, how did you disguise it from those much-vaunted Immortal senses?" I was suddenly more curious than angry.

"I didn't." Complacently. "You remember our talk the other day about mechanical assists? Well, that's what I wanted to test for.

"It was something Melissa said." He shook his head in awe. "Quite a girl, that Melissa." Respectful pause.

"Anyway, I wanted to see if all the curious differences in behavior the Gwerb was showing, compared to other Immortals I mean, couldn't be explained by gaps in its coverage. Remember, you asked me about weak spots?"

I began to realize, for the hundredth time in my long life, that Tommy Calloway was more than the simple con artist he seemed.

"Once I got the notion, I didn't dare get in range of the Gwerb's telepathic sense. At least not before I'd run my experiment. So I had to send you in, a person pure of motive, to carry a danger too old-fashioned for a machine to check for.

"And it worked," he ended simply.

"With what result?" I asked. "You've just annoyed a powerful enemy."

"And showed it that we know its limitations." He smiled nastily. "Yes, I think blackmail will prove to be cheaper than bribery. No wonder the Gwerb didn't want to mingle with its fellow Immortals."

"But it could still have killed me, if

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only out of reflex," I persisted.

Tommy looked haggard all of a sudden. "I'm sorry, Margo, but I had to risk it. The stakes were too high."

He was right, of course.

"You're right, of course." I smiled forgiveness. "Fortunately, it turned out all right. The Gwerb just laughed it off."

"What did you say?"

"Why, it laughed it off, I said. What about it?"

"That's not just a figure of speech, is it?" He was tensed as if to spring.

"No. I distinctly remember. It has a very ugly laugh."

Tommy sprang.

"Immortal One, an ephemeral would approach you." He rushed through the formality and leaned against the hatch. Hard.

"Tommy, what's the matter?"

"Never mind. It might be listening. Stay here and be ready to shove off fast if you hear any commotion!"

"Not a chance! I'm coming with you."

He didn't wait to argue, for the hatch released then and he tumbled through. I dove after, but he was halfway down the corridor—sailing in a long shallow arc—before I made it over the sill.

I flew too.

Evidently the Gwerb was eager to face off against Tommy—it gave him the fastest checkout on record and delivered its somber "Approach" as I fetched up against the doorjamb. (I had forgotten to correct for Coriolis force.)

Tommy was shimmering through the barrier and the Gwerb was halfway to the podium when I came skidding into the room. The alien stopped, eyeing me curiously, but Tommy ignored the interruption and dove for the violin case.

And came up with a vintage Thompson submachine gun.

"Tommy, no!" I screamed. The Gwerb looked at him, then back at me in confusion. Suddenly it dove for its console.

The stream of bullets caught it low and stitched horribly up its twitching frame. Its head exploded and bullets chunked into soft metal before Tommy could shut the gun down.

There was orange-red blood and the smell of cordite. My ears rang.

The Gwerb fell dead, almost as an afterthought.

Tommy blew smoke from the barrel, gangster style.

"Well, there's two theories proved correct. Not bad for one day." His tone was light. Fragile.

"Mm. I wonder what other mechanical aids he used. Let's try the podium." He looked it over, whistling tunelessly, looked up at me.

"Would you mind stepping through the barrier, please?" Numbly, I complied. "Ah. That's what I was looking for." His expression went neutral, softened.

"Why, Maggie, I didn't know you cared."

Once, many many years ago there

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had been a young boy who called me that. It's an ugly name, but I tolerated it because we loved one another, we two did, in that long ago time.

I hadn't heard it spoken aloud in seventy years.

Then I was crying and Tommy was holding me and I could begin slowly, oh so slowly, to adjust to this wondrous new world.

"It—I mean he—must have been a trader," Tommy was saying. "Picking up a gadget here and there, selling a few, but keeping the best ones for his own use. The telepathy machine must have been his greatest prize." He chuckled.

"What a colossal piece of luck he had, stumbling upon us while we're still awestruck by the Immortals. A perfect opportunity to really increase his haul. And you thought I was the con artist."

We were strolling about almost aimlessly (but avoiding the spreading stain on the floor), looking over the console that had once seemed such an impressive device.

"I wonder how many of these doodads are really functional?" I inquired.

"A few, I'm sure. One of them can build a one percent counter-field in a modest-sized planet." *That's right!* I had forgotten. I had been sucked in so completely that I couldn't see the answer when it was staring me in the face. And the diamonds, they would be hidden someplace, along with the mercury. DeBeers would be very happy.

"Then there's the artillery," he went on, pointing to the key that the Gwerb hadn't quite reached. "I wouldn't be a bit surprised if it turned out to be a sorry imitation of the real thing as well." He brushed fingertips across the key.

There was a blinding flash and a scream of tortured air. We spun in terror to find the heap of goods in no-man's-land reduced to a drifting ash. A second barrier had shimmered into life in front of the telepathy podium.

Tommy began to laugh.

All the tension, the pent-up hysteria, burbled out in that laugh. It built and built until he bent double in pain and still he laughed.

It was infectious. I melted from concern into giggles into uncontrollable cascades of laughter. We cried and held each other and gasped—and still we laughed.

When I thought I could control myself I grabbed his face and demanded, between giggles, "Tommy, how did you know he would die? How come we're not dead instead? Tommy?"

He started to laugh again but was brought up by the pain. "That's what comes of being an expert." He giggled, wiped his eyes. "You forget that a lot of things you know aren't common knowledge."

Then he stopped laughing, stopped for good. And, with a new found sobriety that I found somehow frightening, said, "Only mortals laugh." ■

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quantum physics and reality

Alternate universes are not merely gimmicks for SF writers—they're necessary for the salvation of quantum physicists!

MICHAEL TALBOT and LLOYD BIGGLE, Jr.

In 1927, Werner Heisenberg presented his famous Uncertainty Principle and started a philosophical debate among quantum physicists that still is unresolved. In vastly simplified terms. Heisenberg stated that the observer alters the observed by the mere act of observation. Although Heisenberg's Uncertainty Principle deals with the behavior of atomic particles. the debate concerns the relationship between the observer and reality itself.

The origin of quantum physics was the quantum mechanics of the German physicist Max Planck. At the end of the nineteenth century. theories of the distribution of energy in wave radiations failed because none of them proved applicable to the entire spectrum. Planck resolved this dilemma brilliantly with the suggestion that radiation consists of small units comparable to the atoms that make up matter. These radiation units he called *quanta.*

Not only did Planck's quantum mechanics solve the various problems related to energy in wave radiations. but it also explained the behavior of atoms and their electrons and nuclei and led directly to Einstein's Special Theory of Relativity. Planck received the Nobel Prize in Physics in 1918 for his quantum theory.

Quantum mechanics represented a mammoth step closer to the nature of things--to reality. The atom yielded more of its secrets, light was seen as a stream of particles rather than as a

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continuous wave, and a new fundamental theory of the universe resulted.

Then came the Uncertainty Principle, challenging man's ability to know that reality he thought he had discovered.

The Myth of Causality

The Uncertainty Principle provided a challenge to a scientific assumption that had stood firmly since ancient times: the Law of Cause and Effect. Before the advent of quantum theory, most physicists believed in a universe that was wholly causal—a universe where effect inevitably followed cause. In his *Philosophical Essay on Probabilities*, (1812-1820) Laplace stated, "We ought then to regard the present state of the universe as the effect of its anterior state and as the cause of the one which is to follow. Given for one instant an intelligence which could comprehend all the forces of nature and the respective situation of the things that compose it . . . for [such an intelligence] nothing would be uncertain and the future, as the past, would be present to its eyes."

Classical physics seemed to show that causality existed at every observable level. Anything from a weight oscillating on a spring to the motions of planetary bodies represented systems that obeyed apparent laws of causality. Given the initial state of any system, all later states of the system could be very precisely predicted. The great success of Newtonian physics was due to the fact that such laws seemed to exist for virtually every system immediately perceivable to scientists, from billiard balls to computers, from electrical networks to eclipses. Where prediction was impractical, classical physicists still assumed that the system was causal. Even if the physicist could not figure exactly where a bottle tossed into the Atlantic would end up, Laplace's hypothetical intelligence could.

Then came quantum mechanics to taunt physicists with events where nothing even approaching instant causality seemed to exist. For instance, consider a beam of particles traveling in the same direction and with the same velocity. Two of the particles might pass successively through a pinhole and then strike a screen at totally different places. There is no known reason why one particle strikes the screen at a different point from an identical particle. Quantum physicists can determine the probabilities of particles landing at different points, but they cannot explain them. In a universe that always has seemed to be exceedingly causal, such indeterminism creates a new world view whose repercussions threaten to jar, even if they do not shatter, the bedrock of classical physics.

In *The Human Use of Human Beings*, Norbert Wiener points out that it was neither Heisenberg nor Planck, but Willard Gibbs, who first proposed that the universe was

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contingent (unpredictable) rather than deterministic and subject to the Law of Cause and Effect. Gibbs was considering the problems of classical statistical mechanics as early as the 1870s. According to his idea of contingency, the physicist could no longer deal with what always happens, but rather with what will happen with an overwhelming probability. This points unerringly to quantum theory's proposal that ultimately all systems can only be described statistically. The apparent causality of the universe is due to the fact that probabilities on the non-quantum level are very nearly equal to one. The extremely high probability that eclipses will occur on certain determinable dates is the statistical result of an almost infinite number of quantum mechanical events. Wiener states, ". . . in a probabilistic world we no longer deal with quantities and statements which concern a specific, real universe as a whole but ask instead questions which may find their answers in a large number of similar universes. Thus chance has been admitted, not merely as a mathematical tool for physics, but as part of its warp and weft." (Ref. 1)

Schrödinger's Cat

It is this radical shift from a causal universe to a statistical one that has generated the philosophical debate. The implications of an unpredictable universe that can be described only in terms of mathematical probabilities have been dramatically illuminated in problems posed by the Austrian physicist, Erwin Schrödinger.

Take, for instance, the previous illustration of two equal particles passing through the pinhole. Even though all apparent knowledge concerning the particles is identical, they still strike the screen at different points. Schrödinger developed the differential equations that described the development in time of such a physical system. Schrödinger's final equation, however, predicts two equally probable outcomes for the same particle. In mathematical theory as well as in observation, there is no explanation for the unpredictable behavior of the particles. The system therefore seems to have entered into a schizophrenic state of constantly changing values.

This is even more dramatically illustrated in an interesting thought problem popularly known as Schrödinger's Cat. The cat is placed in a box with a geiger counter, a flask of prussic acid, and a hammer attached to a special apparatus. In an adjoining box is a piece of radioactive material such as radium. The boxes are connected by a pinhole. The equipment is arranged so that if an alpha particle given off by the radium should pass through the hole, it would strike the geiger counter, which in turn would activate the apparatus, causing the hammer to break the flask of prussic acid.

If an alpha particle passes through

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the hole, the cat must die. If no alpha particle passes through the hole, the cat will live. According to the interpretation of quantum mechanics, until a measurement or observation is actually made, the system must be described in all possible states at the same time, with equal probability. In other words, until someone takes the trouble to find out what has happened, the cat must be considered both alive and dead. Since this is an obvious absurdity, Schrödinger concluded that quantum mechanics had produced a subjective description of reality and one that was logically inconsistent.

John von Neumann suggested that Schrödinger's paradox was the result of mathematical error. He introduced a second apparatus to determine what had gone wrong, but it also became schizophrenic. So would a third apparatus, and a fourth, and so on, creating a chain known cheerfully as "von Neumann's catastrophe of infinite regression."

The Copenhagen Collapse

Most quantum physicists attempt to escape from Schrödinger's paradox by a method known as the "Copenhagen Collapse." The mathematical equations are not considered to represent reality. They are viewed as merely a device for making statistical predictions, valid only with a large number of examples. According to this view, when an equation produces two possibilities, one of them simply collapses, thereby leading eventually to a single result.

Further, Michael Audi has suggested that the schizophrenia of the quantum system may be more apparent than real. An undiscovered or "hidden variable" could be responsible for the varying behavior of the two particles. (Ref. 2)

Consciousness as a Hidden Variable

In his early papers on quantum mechanics, Heisenberg insisted that physical quantities could be considered real only after they had been observed. Whatever was not experimentally verified revealed no observational consequences and lacked intuitive foundation. It therefore was excluded from the realm of objective reality. (Ref. 3)

After Heisenberg gave quantum theory its fully developed mathematical formalism, however, he and other physicists began to question the nature of a physical or objective reality. As Heisenberg then states, when quantum mathematics no longer represented the behavior of elementary particles, but instead reflected our knowledge of that behavior, the conception of objective reality had evaporated. (Ref. 4)

Eugene Wigner, in an attempt to maintain the existence of an objective reality and still resolve the paradox posed by quantum mathematics, proposed yet another solution: Perhaps consciousness itself is the hidden variable that decides which outcome of an event actually

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occurs. Wigner claimed that the paradox of Schrödinger's cat occurs only after the entry of the measurement signal into human consciousness. He considered it impossible to describe quantum mechanical processes without "explicit reference to consciousness." (Ref. 5) In Wigner's view, the consciousness of the observer intervenes in the dilemma of Schrödinger's cat and determines which of the possible outcomes is observed. Wigner also suggested that a search be made for other effects that the consciousness might have upon matter.

The idea that consciousness is the basis of the material universe is a revolutionary conception for a physicist. The mechanistic and empirical approach to science always has striven to exorcise the ghost of consciousness from any formulation of the laws of physics. Wigner's view that quantum theory demands a reference to consciousness, that the line between consciousness and reality "cannot be eliminated," (Ref. 6) has been challenged, but as yet it has not been disproven.

In any case, reexamination of the relationship between consciousness and objective reality, like the nature of causality, has been forced by Heisenberg's Uncertainty Principle. Princeton physicist John A. Wheeler suggests that a strict empirical approach be replaced by what he calls a "self-reference cosmology." Wheeler asks, "May the universe in some strange sense be 'brought into being' by the participation of those who participate? . . . the vital act is the act of participation. 'Participator' is the incontrovertible new concept given by quantum mechanics. It strikes down the term 'observer' of classical theory, the man who stands safely behind the thick glass wall and watches what goes on without taking part." As Wheeler concludes, "It can't be done, quantum mechanics says." (Ref. 7)

Psychoenergetic Systems

In an article entitled, "Implications of Meta-Physics for Psychoenergetic Systems," Jack Sarfatti explores the implications of a "participator" as opposed to an "observer." Like Wigner, Sarfatti theorizes that the equations of quantum theory are complete only if the properties of the human consciousness are explicitly included. All systems can thus be seen as "psychoenergetic," or affected by both the energy contained in the system and the participation of the human consciousness. According to Sarfatti, even in phenomena such as the Brownian movement—the apparently random zigzag movement of particles in a liquid or gas—the volition of the participator determines the movement of the particles.

"Participator," to Sarfatti, means much more than the individual scientist conducting an experiment. ". . . on the deeper level of quantum interconnectedness it must also include the general range of all living systems" —which means every con-

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scious entity in the past, present, and future. (Ref. 8)

The term *quantum interconnectedness* refers to John A. Wheeler's suggestion that the very fabric of space-time can be viewed as a "quantum foam." Wheeler theorizes that each bubble of the quantum foam is connected *beyond* space-time. These bubbles or singularities in the fabric of space-time can be viewed as tiny "wormholes" that not only connect every point in space with every other point, but that also connect every point in time with every other point. Wheeler thus provides a speculative basis in quantum physics for both faster-than-light travel and time travel. (Ref. 9)

Sarfatti takes this theory one step further and suggests that interactions between consciousness and matter might also occur through the medium of quantum foam. He concludes that one explanation for psychics who can bend spoons with their will power is that they are more in touch with that portion of the human consciousness that affects matter. All living systems possess such a faculty, but certain individuals might have the faculty under direct volitional control. An individual with such psychic abilities should be able to perform Schrödinger's cat experiment and consciously *will* the outcome of the experiment. This extends the range of quantum physics to provide a speculative scientific basis for the powers of extrasensory perception and nonphysical mental processes. (Reference 10)

The Quantum Potential

Returning to the experiment involving a beam of particles passing through a pinhole, we encounter a further puzzle—the existence of a "quantum potential" or interaction between two particles when no such interaction can be physically detected. This puzzle has caused some physicists to look beyond the possible effect of the consciousness of the participator and to suggest that the particles themselves possess some form of consciousness that governs their activity.

When the beam of particles passes through a pinhole and strikes a screen, the behavior of an individual particle cannot be predicted. Only the pattern of distribution of a group of particles can be predicted. If there is an area on the screen where ten percent of the particles are predicted to strike, particles can be allowed to pass through the pinhole one by one, and after ten percent have hit the designated area, further particles seem to *know* that the probability has been fulfilled and shun the area. *They somehow acquire this knowledge without any interaction that could transmit information.* (Ref. 11)

Sarfatti postulates that the interaction or undetectable quantum potential that exists between particles does not take place in space-time. It could only be occurring beyond space-time and perhaps through the medium of the quantum foam.

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In an article entitled, "The Nature of Consciousness," Evan Harris Walker develops the theory that the particles themselves are conscious. Thus the effect one particle has upon another is identical to the effect the participator has upon the particles. Furthermore, ". . . since everything that occurs is ultimately the result of one or more quantum mechanical events, the universe is 'inhabited' by an almost unlimited number of rather discrete conscious, usually non-thinking entities that are responsible for the detailed working of the universe. These conscious entities *determine (or exist concurrent with* the determination) singly the outcome of each quantum mechanical event, while the Schrödinger equation (to the extent that it is accurate) describes the physical constraint placed on their freedom of action collectively." (Ref. 12)

Not only does quantum physics provide a speculative scientific basis for the ultrascience of science fiction and the ultrapsychology of extrasensory perception, but it has tentatively outlined the scientific basis for an ultrareligion.

The Garden of the Forking Paths

In his short story, "The Garden of the Forking Paths," the Argentinian writer Jorge Luis Borges tells of a mythical Chinese nobleman named Ts'ui Pên. Ts'ui Pên vows to do two things during his life: write a book and construct a maze. It is only after he dies that his descendants realize the two projects are one and the same. His book, *The Garden of the Forking Paths*, is cryptic and apparently irrational. In the first chapter the main character is killed. In the second he is alive again. Every time one of the characters is faced with several alternatives, he chooses all of them simultaneously.

Borges describes a protagonist who finally comprehends the vision concealed in *The Garden of the Forking Paths*. It is a theoretical work on the nature of time: ". . . a picture, incomplete yet not false, of the universe as Ts'ui Pên conceived it to be. *Differing from Newton and Schopenhauer*, . . . [he] did not think of time as absolute and uniform. He believed in an infinite series of times, in a dizzily growing, ever spreading network of diverging, converging and parallel times. This web of time—the strands of which approach one another, bifurcate, intersect or ignore each other through the centuries—embraces every possibility. We do not exist in most of them. In some you exist and not I, while in others I do, and you do not, and in yet others both of us exist. In this one, in which chance has favored me, you have come to my gate. In another, you, crossing the garden, have found me dead. In yet another, I say these words, but am an error, a phantom." (Ref. 13)

Although Borges's work is a fiction, Ts'ui Pên's conception of time parallels the basis of yet another reaction to the dilemma posed by

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A Calendar of Upcoming Events

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December 6-8, 1976:
Solar Cooling and Heating (ERDA, University of Miami) at Miami, Fla. Info: Clean Energy Research Institute, University of Miami, Box 248294, Coral Gables, FL 33124.

December 10-12, 1976:
ARKON-ORLANDO (SF Conference oriented towards Perry Rhodan fandom) at Sheraton Towers, Orlando, Fla. SF, Perry Rhodan, Star Trek, Comics. Guests of Honor—Andre Norton, Larry Niven, Kurt Mahr. Info: Arkon-Orlando, Box 475, Boca Raton, FL 33432.

December 20-22, 1976:
General Meetings of the American Physical Society of Stanford, Calif. Info: W. Whaling, California Institute of Technology, 1201 E. California Street, Pasadena CA 91125.

December 31, 1976—January 2, 1977:
Q-CON 3 (Queensland regional SF Con) at Metropolis Hotel, Brisbane, Aust. Guest of Honor—A. Bertram Chandler, Fan Guest of Honor—Leigh Edmonds. Registration A$6 attending, A$2 suporting. Info: Dennis Stocks, Box 235, Albion, Brisbane, Queensland, Australia 4010.

September 2-5, 1977:
SUNCON (35th WORLD SCIENCE FICTION CONVENTION) at Hotel Fontainebleau, Miami Beach, Fla. Guest of Honor—Jack Williamson; Fan Guest of Honor—Bob Madle; Toastmaster—Robert Silverberg. Panels, talks, masquerade, films, Art Show. Presentation of the Science Fiction Achievement Awards (Hugos) and the John W. Campbell Award for Best New Writer. Registration $15 attending, $7.50 supporting until 1 January 1977. Info: Suncon, Box 3427, Cherry Hill, NJ 08034.

ANTHONY R. LEWIS

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quantum physics, the Everett-Wheeler interpretation.

Basically three problems haunt the various interpretations of quantum physics. First, von Neumann's attempt to check Schrödinger's equations for errors assumed that the mathematics were incorrect and described a reality contrary to intuition; but this led to the catastrophe of infinite regression, leaving Schrödinger's mathematics standing beyond challenge. Second, the collapse of mathematical equations employed by the Copenhagen School banished the problem rather than explained it. Finally, proposals such as Wigner's made consciousness an indeterminable variable and yet assumed the existence of a classical reality that Heisenberg's Uncertainty Principle already had denied.

In 1957, the physicist Hugh Everett, along with John A. Wheeler, examined the issues. They subsequently created the Everett-Wheeler interpretation of quantum mechanics—an interpretation that is self-consistent and follows the standard rules of logic. In its basic premises, it:

1) Accepts both the mathematical formalism of quantum theory and the Schrödinger equations.

2) Accepts that the branches of the equations never collapse.

3) Denies the existence of a classical reality. (Ref. 14)

According to the Everett-Wheeler interpretation, probability as it relates to quantum mechanics is different in concept and should not be confused with probability as it is understood in ordinary statistical usage. Quantum mathematics describes a universe in which chance is not a measure of our ignorance about a system but is absolute. The branches of quantum mathematics separate and divide according to the various possibilities of every given measurement, unaffected by new information, and as a result the schizophrenia in the equations of such a universe is inevitable.

The resultant problem of comprehension is the same one confronted by Ts'ui Pên's descendants. As Bryce DeWitt states in an article in *Physics Today*, Everett and Wheeler propose a universe that ". . . is constantly splitting into a stupendous number of branches, all resulting from the measurement like interactions between its myriad components. Moreover, every quantum transition taking place on every star, in every galaxy, in every remote corner of the universe is splitting our local world on earth into myriad copies of itself." (Ref. 15)

The possibility of 10^{100+} universes, all imperfect copies of each other and all totally unaware of each other's presence, has awesome implications. Here is a system of parallel or alternate worlds beyond the manipulative skill of any science fiction writer. In Schrödinger's experiment, for every cat that survives in our universe, in another universe one dies. Not only does every quantum

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mechanical event in our universe cause an indefinite—a number so incomprehensibly large that it cannot even be called infinite!—number of divisions, but perhaps all possible realities exist simultaneously. In such a garden of the forking paths, the solution to the dilemma of indeterminism may be a universe in which all possible outcomes of an experiment actually occur.

IN SUMMARY, no interpretation of quantum theory is capable of experimental proof. The dilemma of determinism versus indeterminism remains unresolved and, at present, unresolvable. In the final examination, the question becomes one of philosophical preference. As F.J. Belinfante states in *A Survey of Hidden-Variable Theories*, "The main driving force toward a belief that hidden variables should exist, therefore, is in the religious belief that 'nature must be deterministic', and that 'everything happening in nature must be predetermined by previous happenings in the physical world', even where our own knowledge is too limited for grasping the physical causes of what is happening." Similarly, interpretations that accept indeterminism also base their final judgments on philosophical preference. (Ref. 16)

The non-physicist, contemplating these edifices involving unlimited numbers of universes based upon no more solid a foundation than a self-contradictory mathematical equation, may raise both an eyebrow and a question. The layman ever has been skeptical concerning speculation as to the nature of reality—a subject he must daily make himself expert in if he is to survive—and when the anvil drops on his foot, he will derive small consolation from the suggestion that its fall was not a certainty but only the statistical result of an almost indefinite number of quantum mechanical events.

When the quantum physicist uses a mathematical equation to deny the existence of reality, is he not in fact affirming the ultimate reality of the mathematical equation? When the universe, or observations of it, do not conform to quantum mathematics, quantum theory asserts that either the universe errs, or man's powers of observation err.

But every mathematics is man-made, and when the quantum physicists affirm, by whatever proofs, that the mathematics is without error, one is inclined to wonder whether the physicist's search for indeterminism may not have carried him along the wrong forking path to a point where the truth he has achieved is more akin to the truth of a work of art than to one of science.

A second perplexity for the non-physicist concerns the fact that the philosophical position of quantum physics, based upon the highest achievements of modern science and mathematics, is closely akin to the philosophical idealism of the eighteenth century as propounded by George Berkeley—a philosophy that

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was antiscientific and largely based upon religion. Berkeley gave philosophy its classic statement of the view that no substance exists in the world except that of perceiving minds or spirits. The paradox of this earlier idealism was expressed in this problem: If a tree falls in the forest and there is no one present to hear it, does it make a sound? This paradox carries us perilously close to Schrödinger's cat.

Whether the guide is Berkeley or quantum physics, man has indeed reached a juncture where he must strive to discover what relationship, if any, human consciousness has to the mechanisms of the universe. As the astronomer James Jeans remarked, the universe looks less and less like a great machine and more and more like a great thought. (Ref. 17)

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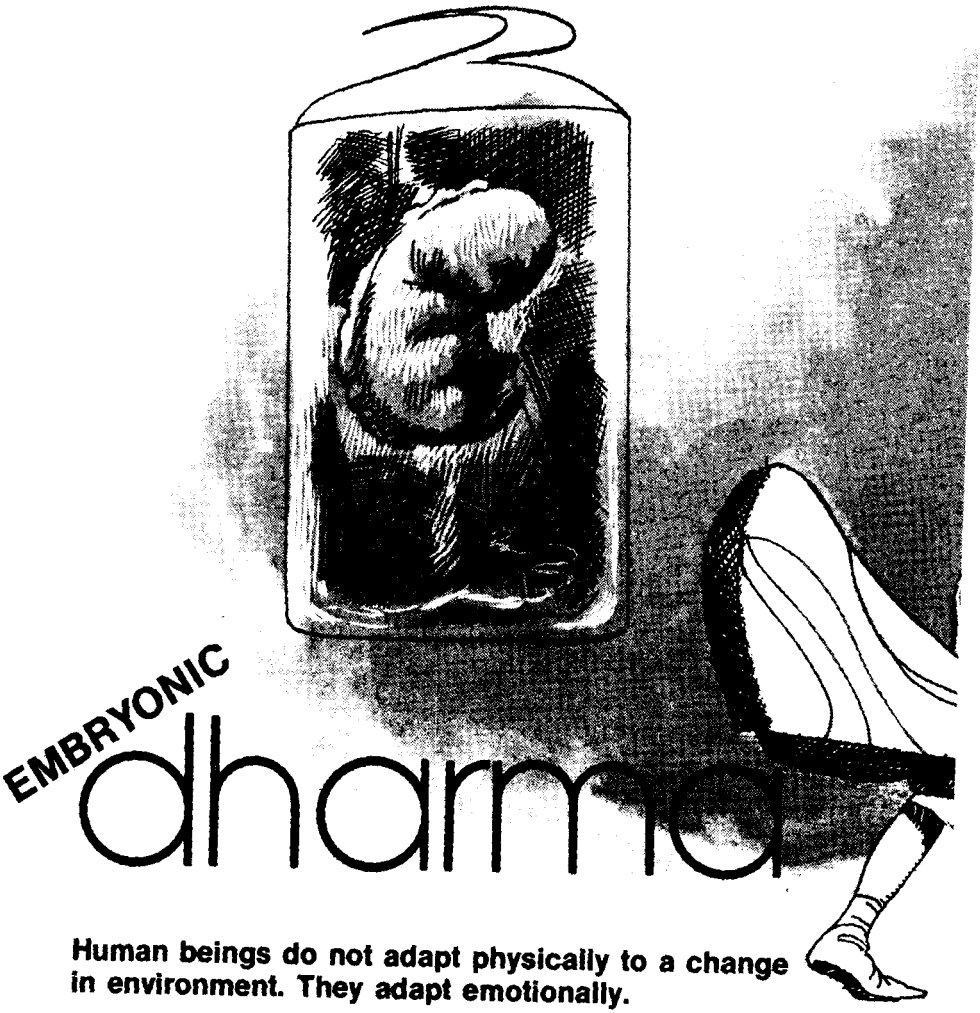

EMBRYONIC dharma

Human beings do not adapt physically to a change in environment. They adapt emotionally.

GORDON EKLUND

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Worn-out garments
Are shed by the body:
Worn-out bodies
Are shed by the dweller.
Bhagavad-Gita

Again and again, in the privacy of his lab, with both doors automatically bolted front and back, Stuart Dorn laid the transparencies of the psychowave charts one upon the other and, again and again, confirmed his original opinion that the two fit like the interlocking pieces of a jigsaw puzzle. *Identical*, he kept thinking, though he knew that should not be true. *These two charts could belong to the same person*, though he knew positively that they did not.

Person or soul? he wondered, revisited by the same disturbing thought which had bothered him almost all along. How do we know for certain that these charts are manufactured by the human mind and nothing more than that? He tried to ease his own anxiety by reminding himself that the question of human souls was presently on his mind only because his husband, Milo, had recently taken up the practice of Yoga. But it fit—that was what frightened him. He might well have found evidence in these two charts that would prove the existence of the human soul.

The truth was that no one knew anything really certain about the psychowave phenomenon, even now. Ten years ago, when the National Data Bank first announced its discovery of distinct waves radiating from the human brain, those circuits involved had openly admitted their own considerable surprise and puzzlement.

And Stuart Dorn wasn't even a programmer. He was no more than a very minor functionary in the Department of Identification and Data Research. Nevertheless, in spite of who he was, if what Dorn had stumbled upon today turned out to be valid, then his discovery might well rank as one of the most momentous in human history.

He held the transparencies up to the harsh overhead light as if the rippling, rolling waves upon the charts might somehow speak and help provide an answer.

Both charts were neatly labeled by the data bank. The first said:

Thomas N. Berman
516-26-4407-19
Born: April 12 2055
Died: April 17 2179

Which was not extraordinary, except for the relatively early death, presumably some sort of accident.

It was the second transparency—the one that fit so snugly upon the first—that made Dorn shiver with the miracle of the unexpected:

Arthur M. Frederik
597-44-3202-98
Born: January 19 2180

And it was those final two dates that had first started him thinking about the antique doctrine of the human soul, for when one subtracted April 2179 from January 2180, one

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received an answer of nine months, and no matter how minutely the birthrate may have dipped in the face of growing human immortality, certain biological facts remained unaltered: it still took nine months for the human embryo to develop from the moment of conception to the moment of actual birth.

And the two charts—Berman and Frederik—were identical.

In the past ten years, the psychowave chart had completely replaced such primitive identification devices as finger, toe, and voice prints. In that time, at least so far as Dorn was aware, no two identical psychowave charts had ever been uncovered, and close to fifty million—the present human population of the United Federated Americas—lay within the precincts of this very building.

But no one—until today—had ever thought to compare the chart of a dead man with that of a child born nine months later.

And Dorn had done it strictly by accident. The two charts, in his lab for completely different and routine purposes, had simply chanced to fall upon one another. His eye had caught and then noted the similarity. Initial surprise. Then puzzlement. And finally amazed conviction: the two were not only similar; they were identical.

But that was two hours ago. He knew only one way to explain it. If the soul, as a few people like the Hindus had always believed, fled the husk of a dying body and in turn entered an awaiting womb, and if the psychowaves represented the individual radiations of these souls, then the reason the two charts were identical was that Berman and Frederik, though different persons, happened to possess the same immortal soul.

Fantastic? Yes, of course.

Incredible? Yes, quite likely.

But impossible? No, not necessarily.

So, whom should he tell?

Alone in his lab ten stories above the clean, empty streets of the city below, Dorn was driven between conflicting desires. He very much wished to scan home and tell his family of his wonderful discovery and receive their praise and congratulations, but he also knew that he should first notify SHER, his supervising circuits, in order to obtain its second opinion.

But he hated facing that maze of beeping, glowing, flashing machinery—and he always had.

Still, duty won out. As much as he wished to avoid visiting that cool, sterile room where the machine gently hummed, this was no time for such hesitations. Even though one of his wives coincidently happened to be pregnant, there would be plenty of time later to handle the personal ramifications of his discovery.

Turning away from the hot ceiling lights, Dorn hit the automatic control of his pre-set pocket scanner.

In an instant flash, his various component molecules shattered.

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He had known enough to bring both psychowave charts with him.

By the year 2180, the average child born to human parents native to the United Federated Americas bore a life expectancy of some 214.89 years. If the parents happened to belong to the ten percent of the population who continued to work at paying jobs, that figure might possibly be reduced by a year or two. Still, because of the spiraling discoveries constantly being made in the fields of medicine and genetics, many biological circuits maintained that any actual figure was misleading: the truth was that any child born after about 2140 was not apt to grow old or die. Ever.

Despite the shock of his discovery, Stuart Dorn could not help remembering the strange events of the night before. How could he best explain his own unprecedented behavior? A premonition of some sort? He didn't believe that, and yet it was true, even though he was much older than his husband or wives, that the idea of a ritual abortion party was not entirely new to him. Still, age did cause some differences, and as much as he loved the others, their cultural patterns often seemed bizarre to him.

Materializing in the living room of the big house he owned, Dorn had immediately noticed the flashing sign dangling through the ceiling mists above: **Family Meeting • Big Business • Crystal Room**

In retrospect, he wondered if his irritation had not begun here. The others, of course, did not work, and only Melissa sometimes seemed able to understand why he, who did, often wanted nothing more than a quiet meal and a quick rest when he returned home late from the lab.

Still, the sign did say there was important business to consider, so he hopped aboard the central walkway and rode upstairs. The crystal room, which Milo had designed, flashed and swayed and glittered as Dorn entered through the dilating door. Jagged waves of crazily pulsating light assaulted his eyes. Blinking and squinting, he stumbled forward.

He heard them giggling in the distance and forced himself to stand still until his vision adjusted to the brutal light. Then he saw them clustered near the far wall. Milo floated upon a cloud pillow, his legs crossed and folded underneath him, his arms interwoven. Melissa sat beneath him, while Jenny lay cradled like a child in her lap. Of the three, only Milo was dressed, a narrow beltskirt. Seeing so much youthful, unblemished flesh, Dorn recalled with dissatisfaction those dreadful, dull years he had spent with his first wife, Bonnie. Youth and vitality—that was what Milo, Melissa, and Jenny brought to him. Through a process like osmosis, these qualities flowed from them to him. Dorn was fifty-nine years old; in their company, he often felt twenty-nine.

From his floating perch, Milo said, "Well, welcome home at last, Stuart."

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He tried to smile. The others—especially Milo—often teased him about his need to work, but the truth was that a totally idle life, like theirs, would simply have bored him. He enjoyed working, even apart from the extra money the economic circuits credited to his account, but they seemed unwilling to understand. "The sign downstairs said we had some business to transact."

"Well, actually it's an announcement," said Milo, who suddenly yawned. "Melissa, why don't you tell him? I'm tired of talking."

Melissa, who was nearly thirty and very dark, spoke openly: "The medico says Jenny is going to have a baby."

"Mine?" cried Dorn, springing to his feet.

Milo looked amazed. "What did he say?"

"I think," Melissa said, "he asked if the child was his. You'd know that better than Milo or me, Stuart."

"Yes," he said quickly. He felt ashamed and silly. "I suppose so."

"That was an awfully funny thing to say," said Milo.

"Oh, don't tease him," Melissa said. "Why don't you just tell Stuart what we've decided and then let him dial some dinner?"

Dorn flashed her an appreciative smile. Perhaps because of her age, Melissa had always shown him more sympathy than Milo or, when she was rational, Jenny.

Milo said, "We're going to have a ritual abortion."

Dorn blinked, at first confused. He failed to draw the connection between a general practice with which he was familiar and the specific circumstance of his own unborn child. "A what?" he asked.

"Oh, you know," said Milo, "it's when we throw a party for our friends and the medico wheels in and extracts the thing from Jenny's belly. The three of us went to one at the Kelon family last week—you were working—and it was very interesting."

"But—but that's ugly," said Dorn, who failed to disguise the sudden, inexplicable horror he felt. In the past, he had never seen anything wrong with abortions. They were certainly more common than actual childbirths, and Bonnie herself had had two without incident. "Shouldn't something like that be done in private?"

"How come?" said Milo, who seemed genuinely surprised by Dorn's reaction. "The Kelon family keep theirs in a jar on the mantlepiece. You can go see it if you want."

"I just think it's wrong," Dorn said.

Melissa tried to be soothing. "But Jenny herself wants it that way. You can't really expect her to have a child."

Dorn nodded and looked at Jenny, who seemed to be alseep against Melissa's bare shoulder. He was becoming aware that this was exactly what he did expect: he wanted Jenny

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to bear his child. But how could he hope to explain such an alien concept to them? For the first time since contracting for this marriage more than a year ago, he felt hopelessly apart from his own family.

Turning, unable to control his own confusion, Dorn attempted to leave, but in the crazy maddening light, he misjudged the position of the door and crashed headfirst into the hard wall. As his eyes watered in pain, he ran his fingers quickly along the wall. Discovering the oval of the door at last, he turned and staggered through.

Behind, he heard Milo say, "What came over him?"

Melissa sighed. "It's really nothing you should try to understand, dear."

But now, after what he had discovered in the lab, Dorn believed that he did have a way of making all of them understand.

By the year 2100, the birthrate in those nations soon to link up in the data net of the United Federated Americas had reached the level of only 4.3 per 1000 population. Fifty years later, that figure had dipped to a mere 1.4 per 1000 and, in 2180, the figure stood at 0.15. The number of abortions annually was estimated—the data banks refused to provide humans with actual totals—at a figure five to eight times greater than the birthrate.

The molecules of Stuart Dorn abruptly reconstituted themselves in a bare, high corridor shaped like a white tunnel. Dorn blinked, shook his head to clear the momentary confusion that always followed a scan, then noticed the psychowave charts in his hand and remembered everything. He took two steps boldly forward and halted in front of a heavy blank door. He cleared his throat and said, "SHER, I have something important to show you."

"Oh, Stuart," said a soft, gentle voice filled with feeling that seemed to emanate from within the door itself, "won't you please enter?"

Dorn moved ahead and, as he did, the door compliantly dilated to allow him to pass.

SHER, a disorderly panel of slots, dials, buttons, levers, and wires, occupied the farthest wall of the tiny office. Dorn took a seat facing the machine—which was, of course, only a portion of the National Data Bank—and tried to force himself to relax. He never felt comfortable here. It was as if SHER could see through him, correctly interpret his every minor gesture. He attempted to sit very still but the charts in his hand insisted upon flapping.

The voice now came from inside the panel itself. "You have not presented yourself to me with much frequency lately, Stuart." There was a hint of censure within the generally kindly tone.

"I've been rather busy." He crossed his legs and shifted in the chair. "I couldn't get away."

"Ah, yes, your recent marriage.

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And how is that working out? As you know I hesitate to approve such relationships for my employees but made an exception in your case because of past evidences of rationality."

"The four of us are very happy," Dorn said, perhaps too defensively. But that wasn't why he had come here—to discuss his love for his family. Standing, he brought the charts closer to the machine. "I'd like to have you look at—study—these two charts."

"Something interesting?" said SHER, and Dorn could swear the machine was patronizing him.

"You be the judge, sir." He dropped the charts into an input slot upon the panel, then stepped back. A moment later, the charts reappeared through another slot at the left end of the machine. Dorn went to retrieve them.

He waited impatiently for SHER to express its amazement. The exclamation was mysteriously long in coming.

Finally, SHER said, "I observed the psychowaves of a man unfortunately dead and a child recently born."

"But didn't you notice?" Dorn held up the charts in exasperation. "They're identical, which is impossible, unless you assume that—"

"I noted a certain similarity, yes." The kindness was gone from the machine's tone. There seemed to be a new note in its voice—a hard edge.

Dorn stared at the charts and shook his head. What was going on here? "Not similar, sir, identical." He thrust the charts toward the machine. "Here—look again."

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The machine chuckled pleasantly, a presumption that always irritated Dorn. "I am fully capable of evaluating the data without additional input. What you have just told me is simply invalid."

Dorn sat down again, striving to be calm. "You mean it's impossible, but it's not. I've developed a theory that will explain everything. Did you notice the dates on those charts? Well, the first man, Berman, died in April of last year, and the second, Frederik, was born just this January. What that means is that Frederik was conceived the same month Berman died, so what if psychowaves have

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nothing really to do with the thinking function of the brain—you said yourself, when you made the first announcement, that you weren't sure—but they are actually the radiations given off by the human soul."

"There is no such quality as a soul."

"You don't know that." He was getting excited, nearly shouting. This meeting had not progressed as Dorn had anticipated. He had come here expecting to be praised and congratulated for a momentous discovery; instead, he had been called a liar and a fool. "It would explain everything. The charts are identical because these two people have the same soul inside them."

This time SHER actually laughed—with derision. Dorn had never heard such a terrible sound in his life. "You're not suggesting some form of reincarnation, are you, Stuart?"

"Yes," he said defiantly. "That's exactly what I'm suggesting."

"But that's not science, Stuart, that's mystical mumbo jumbo, the very thing your species, through its many brilliant innovations, has long since conquered."

"But I have proof!" cried Dorn, springing to his feet and waving the charts. "Firm, solid proof."

"I'm afraid the input you have provided me does not constitute proof of any kind."

"Then . . ." Dorn was thinking fast, desperately. "Then let me check further. I can tap the data bank for additional charts to compare. Everyone born in the last few months and everyone who died nine months before that. Then I'll have all the proof you or anything else will need."

Again, an extraordinarily long pause ensued before the machine spoke. "I cannot permit that, Stuart. Such research lies wholly outside your occupational designation."

"But, damn it, you can't just ignore this!"

"Stuart—" the machine spoke slowly and carefully "—your present language and tone borders upon open insubordination. I must warn you that any further such outbursts may seriously jeopardize your employment status."

Dorn drew hastily back, as if fearful of being singed. He was as much confused as angry. What was going on here? Why did the machine refuse to acknowledge the truth? "I'm sorry. Perhaps—perhaps I'm just tired. I'll—I'll be going home now." He turned toward the door.

"Stuart," called SHER.

He turned back as the door dilated. "Yes?"

"Those two charts. Please reinsert them. Perhaps a necessity does exist for further study."

He showed his relief and pleasure. "Oh, thank you, sir."

But, as he stood empty-handed in the outer corridor, waiting for the molecules to scan homeward, he couldn't help wondering whether he was ever apt to see those two psycho-

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wave charts again in his life.

The general decline in the world's birthrate, which began in the late twentieth century and reached highwater proportions in the twenty-second, intrigued many sociological circuits, who sought various explanations to interpret the phenomenon. One suggestion frequently announced was that the shrinking birthrate had its roots in simple economic terms: once automation was complete and human labor no longer necessary, then children lacked any intrinsic value to their parents. Another possible solution was based upon the survival instinct: as the average lifespan lengthened, people became unwilling to clutter up their finite world with large numbers of other bodies. A third factor, once eternal youth became a near certainty, was probably fear of social competition. Few people sixty or over, with more than a century of old age looming before them, were eager to create large numbers of ever-vigorous youths.

Stuart Dorn, after another full day in the lab, decided that he could no longer remain silent concerning what he believed he had discovered; he had to tell someone else, someone human.

So when, that night in bed, he saw the ceiling slide open and a lean figure enter the circle of light above, Dorn experienced a wave of delight and relief. Melissa's nude body slowly floated down toward him. He caught her in his arms and, on an impulse, kissed her on the lips.

She drew back with a shrill laugh of surprise. "Stuart, don't tell me: you've been sneaking Milo's virility pills."

"No, no," he said, embarrassed. "I'm just—I'm glad you came tonight."

"Well, I'm glad, too." She snuggled close, as if to embrace him.

"No, wait," said Dorn. "There's something . . . Melissa, I've got to talk to someone—to you."

"Talk?" She seemed puzzled but rolled away. "Well, all right, if you want."

So he told her. Everything. About the identical psychowave charts. The importance of the dates. The theory he had finally devised to explain everything. About SHER's reaction.

"Maybe you just made a mistake," she told him, but he thought she was worried—and puzzled. "SHER is part of the data bank. It's not supposed to be able to be wrong."

"That's what worried me, too—at first. But today when I came to work I tried to tap the charts for any recently born children. And they were forbidden me, Melissa. The receiver said I couldn't see such data."

"Well, it's supposed to be confidential, isn't it?"

"Yes, but that shouldn't matter. Not with me. No, what I think it means is that SHER—the whole data bank—it knows I'm right. Maybe it's known all along, since the first discovery, and intends to suppress

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the truth. It took away the two charts I did find--I was stupid enough to give them up--and now I can't obtain any more."

She was silent for a moment, puzzled. "Why would it want to do that? I've had educational tutors. At one time millions of people believed that, when they died, their souls went right on living. It's not a new idea."

"No, but it is a dangerous one."

"Why? People don't die at all any more. Who would even care?"

Her attitude somehow disturbed him. "I would, for one. Not everyone is immortal. Old people aren't--and embryos."

She was shaking her head. "Embryos don't die. They aren't even born."

"But they may have souls. If my theory is correct--and I'm beginning to believe that it has to be--then they must. That's why I need Jenny's help."

"Jenny?" She shook her head. "If Jenny has a soul, then it's just going to stay there. She's immortal like me. She won't die."

"Not her--the child--the embryo. I want to take it--her--to the lab and try to do a chart. That will give me something to work with. I should still be able to tap the data bank for charts on recently dead men. With any luck, I'll find the soul that matches Jenny's embryo and then I'll have all the proof I need. This time I won't give it up, either--not to anyone or anything."

His fervor seemed to impress her. "Maybe I ought to go with you. Jenny isn't always that easy to control, and I think she's afraid of you sometimes--because of her father and mother. If she does something crazy, I can help out."

He reached out to her in relief. Melissa was somehow different from the rest--warmer. Sometimes she reminded him of his old wife, Bonnie, and the way she had acted during the first months of their marriage. "Thank you, Melissa. I really appreciate that."

She rested her head on his shoulder. "I guess this is important."

"Very important. If I'm right, this may turn out to be one of the most significant discoveries in the whole history of the human race."

He felt her head nodding. "I understand, but there is one thing. If you are right, then why won't the data bank just tell you? Why should it want us not to know that we have souls?"

Dorn could only shake his head. "That's the part I don't know either, Melissa. I just don't know."

By 2180, with seventy-seven percent of the population of the United Federated Americas eighty or more years old, many psychological circuits had become increasingly concerned about the widening gap that seemed to separate the young and old. A considerable quantity of frightening data received wide circulation. The murder rate--though still minute--began to show a distinct correlation with severe age differences. The old were killing the

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young—and, to a somewhat lesser extent, vice versa—in ever increasing numbers. A few psychological announcements even hinted at the possibility that the human race might be more properly divided into two sub-species: the first comprising those relatively average people over forty, and the second, the new ageless youth, *homo immortalis*. It didn't make sense, these circuits cautiously implied, to expect a group who lived with no firm expectation of death or old age to think and act the same as those who endured with the constant dread of ultimate senility and extinction.

Because Jenny seemed frightened—she seldom ventured far beyond the precincts of the family home—Dorn took care to avoid any undue shock by walking with her from the outer security door to the basement lab three floors below ground. Today was Sunday—the building was almost deserted except for the maze of circuitry humming obliviously above—and Jenny giggled each time they approached a locked door and he opened it by saying, "Stuart Dorn, Department of Identification and Data Research, 510-50-2228-47." Melissa accompanied them. She seemed anxious also about invading such strange, forbidden corridors.

"There's no real reason to worry," Dorn said. "I've taken every possible precaution. Getting caught down here would mean a lot more to me than you. If SHER found out about it—and it would have to—that'd mean my job for sure."

"Are you sure it's worth the risk?" Melissa said.

"All of the security—the locked doors and everything—is largely on the surface. I mean, why would anybody want to sneak in here and run off a surreptitious chart?"

"You want to," she said.

"And you know why, too."

Jenny was beginning to weep, and Dorn hurried ahead to soothe her. Frankly, the girl made him uncomfortable and always had. It was because of this that he hadn't been sure—at least at first—that the child she carried was also his. He tended to avoid sex with Jenny, because of the discomfort, and she seldom stirred

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from her room to come to him. Melissa, who had known her for a long time, said that before her lobotomy Jenny was a bright and normal person. Her parents had authorized the operation—apparently they hated her—in a fit of spite. Afterward, Milo—from pity, Dorn supposed—had offered the contract of marriage. The way she looked, even sometimes the way she moved and laughed, reminded Dorn powerfully of his own daughter, Nora, who had divorced Bonnie and him some years ago and disappeared from sight. But that resemblance only made things worse as far as he was concerned. Milo had consulted a flock of medicos, who all delivered the same evaluation. The damage inflicted illegally upon Jenny's brain was quite irrevocable. The universe she inhabited would remain all her life an alien and foggy place, filled with darting shadows and gaudy, half-seen demons.

Entering the recording studio, Jenny let her eyes grow wide and drew close to Dorn, who held her comfortingly. Waving Melissa inside, he then carefully sealed the big door. "Take Jenny over and put her in that chair. I want to be sure everything's set and then we can attach the wires and take a reading."

Melissa nodded. The sterile, confined atmosphere of the room seemed to set poorly with her. "I hope this won't take long."

"It shouldn't," said Dorn, "once we get going." He went over and double-checked the recording instruments. Everything appeared to be in satisfactory condition and he tentatively set the main panel to read.

Jenny sat upon a large, wired chair set six inches off the floor. Dorn, coming over, asked her to pull up her smock and reveal her abdomen. "What we want to do is sort of take a picture of your baby's mind. I'm going to put some wires on your skin but it won't hurt and it'll be over in a moment."

Jenny pulled up her dress with practiced ease. "I hate that baby," she said casually.

"You shouldn't." Hiding his repugnance, he fastened the recording wires where he assumed the womb to be. "It's part of you now, just like an arm or leg."

"No, it isn't. Somebody else put it there. You did."

"But it's yours, too, Jenny." He realized how useless this probably was—trying to argue rationally with her—but felt he had to try. At least her condition wasn't hereditary. The child, when born, would be normal.

"Milo says I'm going to have it taken out. A medico is going to come and all our friends. It's going to be a party—everyone will have fun."

"Is that what you want, Jenny? Just to have fun?"

"Milo says, if I have the baby, it will hurt. He says it'll hurt so bad I'll get all torn up inside."

"Milo's never had a baby."

Jenny giggled. "Neither have you, Stuart."

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"No, but my wife did. My old wife—Bonnie. She had a daughter named Nora. She was only a few years older than you and very pretty."

"And it didn't hurt?" said Jenny, almost eagerly.

Dorn wouldn't lie. "It hurt some, yes, but some hurts are worth enduring. Your mother must have thought so or she wouldn't have had you."

"My mother hated my guts," Jenny said, bitterly.

Dorn started to explain when Melissa touched his arm. She whispered, "Why don't you wait? See what you find out here and then worry about the abortion."

He nodded, knowing she was right. After all, if it turned out that he was wrong, then the abortion wouldn't matter one way or another. He drew back away from Jenny and told Melissa, "Go on over to the recording panel and wait there. When I drop my hand, push the middle button. This shouldn't take long."

"All right, Stuart." Melissa went away.

As Dorn bent to check the wires he had attached to Jenny's womb, she suddenly resumed the conversation at an earlier point. "I'd like to meet your daughter, Stuart, and be her friend."

He shook his head, wounded, as always, by that recollection. "I'm afraid you can't. She's gone now."

"Gone?" She seemed horrified. "Not dead?"

"No, divorced. It was my wife's fault—mine, too, I suppose. She was young and we were old and I guess we failed to understand each other very well."

"But I'm young, Stuart."

"I know." He patted her hand reassuringly. "And I've changed. But it's too late. You know how it is after a parental divorce. There's no way of finding her again."

"I bet you loved your daughter."

Melissa was calling that she was ready but something forced him to go on with this conversation, as much as it hurt him. "I did. That's what's so wonderful about having a child, Jenny. She's like yourself, but different, too. Maybe that's why I can appreciate what you can have. I had a daughter and lost her."

"But that's not really why I hate it."

"No? Then why?"

"Because it's going to be dead. When the medico takes it out, it'll be dead. I hate everything that's dead."

"Then don't let it die."

She seemed surprised by the possibility. "Do you think I could?"

He nodded. "It's up to you, Jenny. If you decide to have the baby, just tell me."

"And you'll tell Milo?"

"Yes, Jenny. I'll tell Milo." He patted her hand once more, then stepped back, satisfied with what he had achieved. He raised his hand and signaled Melissa to activate the recording panel.

The process would not take long.

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A few minutes—even through the thin layer of flesh—no more. The panel hummed softly behind him. He watched Jenny, then stepped forward and took her hand. She showed some strain from the gentle current tickling her body. "Don't move if you can avoid it," he said. "You don't want to detach the wires."

Melissa came over and joined them. "It won't hurt her, will it, Stuart?"

He shook his head. "No, not really."

"She thinks it is."

He saw what she meant. Jenny's body now sat stiffly. Her eyes were shut, and beads of sweat dappled her chin and brow. "Hold on," he told her softly. "It shouldn't be long now."

"Stuart, I think it's moving," Jenny said. Her body was rigid. She began to tremble like a terrified child.

He knew she was in error. The embryo wasn't nearly sufficiently developed to be mobile. "It can't be, Jenny."

"But it is, Stuart, it is. The baby wants to be alive and it knows—it knows we want to kill it." She twisted against the wires.

He gripped her arms and forced her back in the chair. "Jenny, no. Sit still. Don't move."

"But it's not me. It's the baby—not me."

"It can't be. Sit still, Jenny. Don't move—please."

"Stuart," said Melissa softly, "maybe you could shut—"

He turned his head on her, a focus for his anger. "Are you crazy? Shut it off now—now when we've nearly proved that—?"

But Jenny screamed. Loudly. In terror.

Dorn held her tightly, refusing to budge an inch as she squirmed and fought against him.

A few seconds later, in the middle of the receiving panel, a round dial beamed green. Dorn caught the flash out of the corner of an eye. Jenny was sobbing openly, her stomach rising and falling with great gasping heaves.

He let her go and fell back. "It's over," he told Melissa. "We've got what we needed."

As Melissa moved forward to comfort Jenny, Dorn crossed over to the panel and removed the completed chart. Of course, with nothing to compare it against, the chart was no more than a white page covered with jagged, swirling lines. The soul of a child, he thought. My child.

Jenny continued to sob.

"Why don't you take her home?" Dorn told Melissa. "I'll be along later."

She nodded and bent down to help Jenny to her feet. As the two of them moved toward the door, Melissa hesitated, then stopped, then turned back. "Stuart," she said, and there was a strange, quizzical look in her eyes, "I hope this turns out to be worth it."

He nodded firmly and held up the

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chart in his hand. "If I'm right," he said, "then it will be."

Nearly all sociological circuits agreed that the youth culture of the late twenty-second century United Federated Americas was something wholly unlike anything that had ever preceded it. Without any dread of eventual death, those men and women under the age of forty were able to instinctively develop a value system quite free from traditional moral and ethical restraints. If they seldom caused direct harm to others—only a handful could be labeled as members of the criminal classes—this was largely because crime in the twenty-second century brought little but immediate benefits, and those incipient immortals, with all of time as their plaything, showed as little interest in immediate rewards on earth as they did in final rewards in heaven. The youths lived slow and cautious lives in many respects, like underwater swimmers in dangerous deeps, inflicting little harm—and less good. In their attitudes, they differed as drastically from their meddling parents as a stumbling tortoise differs from a raging lion.

What disturbed Stuart Dorn among other possibilities, as he lay flat on his back in bed gazing in wonder at the two identical charts—his own son-or-daughter and a man named Alexander Fame dead less than a month—was that no firm proof existed that the supply of available human souls was inexhaustible. What was even more frightening, he had no way of determining the effect upon a soul of embryonic abortion. Could a soul be said to be alive if the body it occupied was never born? If not, then what happened to it afterward? Could the soul possibly remain trapped, a prisoner forever inside the dead husk of an unborn infant?

These were bleak thoughts, but not impossible ones, and such conjec-

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Place	Title	Author	Points
1	Shadrach in the Furnace, Part II	Robert Silverberg	1.963
2	Weather War	William E. Cochrane	2.590
3	Aspic's Mystery	Arsen Darnay	3.000
4	The End's Beginning	Vonda McIntyre	3.400
5	The Money Machine	Pat Underhill	3.804

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tures led Dorn more and more toward the determination that Jenny's abortion must be prevented at all costs. How many abortions could the human race endure before—with million of souls forever trapped—the pool of possible souls became finally depleted? Abortion might well stand as the most serious threat in history to the continued survival of the human race. Would even physical immortality—which, he reminded himself, was still not a proven fact—beat back this danger permanently?

With these thoughts in mind, Dorn floated out of his room and rode the northern walkway to Milo's domain. The room was a tiny, deliberately confined exact cube, with pink padded walls and an atmosphere stale with the reek of old perfume.

Milo slept unclothed on a tattered mattress on the floor. When Dorn dropped beside him, Milo rolled onto his stomach and lifted his hips slightly in the air.

"No," said Dorn, "not that. I want to talk to you."

Milo looked sleepily away. "What about?" Rubbing his eyes, he managed to sit up.

"Jenny. Her abortion. I want it delayed—or canceled."

Milo seemed neither surprised nor displeased. "How come?"

Dorn began to tell Milo about the evidence he had so far uncovered. He had brought both psychowave charts with him as additional proof.

Milo said, "Oh, yeah, that. Melissa told me."

Dorn felt a momentary flash of anger at this betrayal. "What exactly was it she told you?"

"Well, I don't remember all of it. A bunch of mumbo jumbo about how you were trying to find out whose soul it is the baby—the embryo—is carrying around. I'm afraid I didn't pay much attention to all of it. She said I shouldn't tell you that she told me, but I guess we are married. Married people shouldn't keep secrets, should they?"

Dorn could have debated that but resisted the temptation. "What else did she tell you?"

"Just what you did now. That the abortion should be stopped."

Dorn felt a wave of gratitude toward Melissa. She had only been trying to help, after all. "And what did you tell her?"

Milo grinned. "The same thing I'm going to tell you—that you're nuts."

"No, I'm not." Dorn struggled to prevent too much pride from creeping into his voice. He held out the two identical psychowave charts for Milo to see. "One of these I recorded from inside Jenny's womb. The other I obtained by tapping the data bank for anyone dying in the Bay Region in the past month. There weren't that many, and it was easy to check each one till I found a match."

Milo leaned over and stared at the second of the two charts. "Who did you say this was supposed to be?"

"A man named Alexander Fame. As far as I can determine, he died a normal death from natural causes at

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the age of two hundred and three. He worked as a case consultant in the Social Research Department in the building next to mine. Of course, there was always the possibility that the soul might have come from halfway around the world, even another planet, but I worked on the theory that a soul would be part of the physical universe and therefore subject to such concepts as distance. Instead of floating all around, it would head for the nearest available womb as soon as it could. That must have been what happened here."

"Then Jenny's kid is going to be a sort of reincarnation of this man Fame?"

"Well, I don't know about that. Nobody does—yet. Souls exist, that much is for certain. But what they are, their properties, or what they represent, that will take a great deal more research to determine."

Milo nodded. "I see that. What I don't see is what it has to do with Jenny's child."

"But I've just told you." Dorn said. Calming himself, he described his recent theory of soul entrapment. "So," he finished, "we don't dare go ahead with the abortion. Not now. Not until we know for certain what it may cause."

Milo seemed uncertain. He kept shaking his head, nodding it, shaking it. "But Jenny's afraid. I think she's even afraid of that thing inside her. I think that's your fault, too. She keeps talking about it dying. I think you've got her obsessed."

"Jenny's not right in the head. You know that."

"I know it means she's in no condition to be a mother."

"The data banks will handle that."

But Milo remained unconvinced. "I just think it should be up to her, Stuart."

"Damn it, can't you understand anything? Who are you trying to kid? This whole thing with the ritual abortion—that wasn't Jenny's idea, it was yours. If you go ahead now, it's the same as murder."

Milo seemed dazed by this attack. He shook his big head sullenly. "If she'd told me it was going to be like this, I would have told her to forget it."

Dorn stopped coldly. "She?" he asked. "Who's she?"

Milo said, "What's her name? Your daughter."

"Nora."

He nodded. "Yeah, her."

Dropping the charts, Dorn reached out and grabbed Milo's bare arm. "What does Nora have to do with this? You don't know her?"

Milo laughed. "Hell, I was married to her."

"That's a lie."

"Look, Stuart, who do you think was here before you?" He tried to draw his arm away but Dorn's grip remained firm. "It used to be me and Melissa and Jenny and this Nora. But she got a better offer. I said life was fun but we needed a bigger account to thrive. Nora suggested

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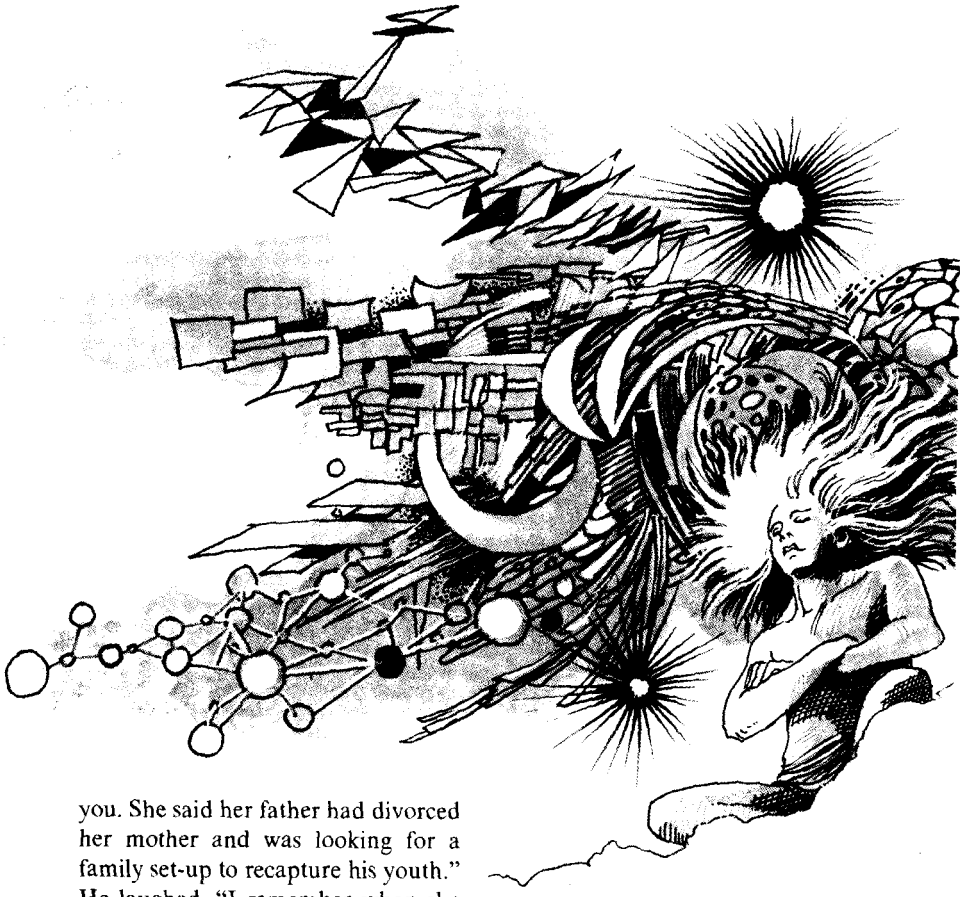

you. She said her father had divorced her mother and was looking for a family set-up to recapture his youth." He laughed. "I remember when she said that: recapture his youth. I thought it was funny. Nobody can do that. When you're old, you're old, and pretty soon, Stuart, you'll be dead."

Dorn shook his head. "I don't believe a word you've said. Nora disappeared years ago. She wouldn't have any way of knowing about me today—none at all."

"She works for the data bank, Stuart. The same building as you—right upstairs. That's what we thought was so funny. She said she saw you all the time and you never recognized her."

"That's a lie!" He reached for Milo's throat. Until this instant, he had never realized the strength of the human hand. His fingers clutched Milo's broad neck and squeezed with all their might.

Milo gasped. "Stuart, let me go. Please. It's a lie. Let me go."

Dorn saw something in his hus-

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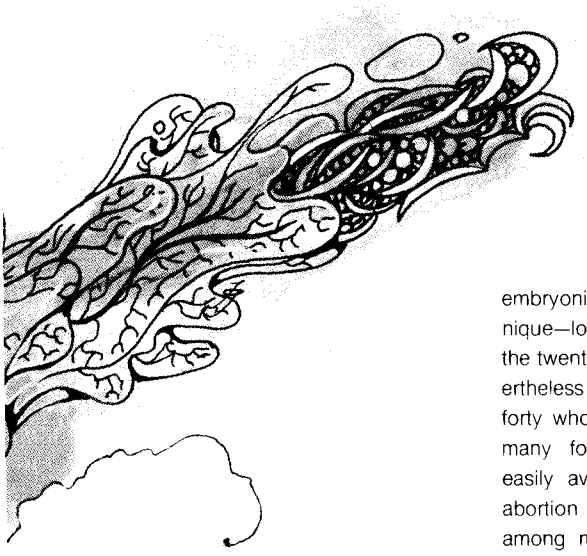

band's eyes that he had never glimpsed in anyone so young: it was fear—fear of death. Well, Milo, he thought with satisfaction, death isn't such a casual thing when it's all your own, is it?

Dorn released Milo and swayed to his feet.

Choking and heaving, Milo fell upon the mattress.

Dorn moved toward the ceiling exit. "I'm warning you one more time, Milo. Don't lie to me like that—ever. The next time, I will kill you."

One example often raised by certain circuits to indicate the vast gap separating the cultural tendencies of the young and old was the matter of embryonic abortion. Not a new technique—local legalization dated back into the twentieth century—abortion was nevertheless shunned by most people over forty who preferred to make use of the many foolproof birth control devices easily available. In contrast, by 2180, abortion had become something of a fad among many young people. The incidence of pregnancy among women under forty years reached comparatively fantastic rates. It was not uncommon to discover in some family marriages as many as a half-dozen wives simultaneously carrying embryos within their wombs. The authorization by the data bank in 2169 of a cheap, mobile all-purpose medical unit was often blamed for—or credited with—making it possible for young people to experiment with their bodies in this previously expensive manner. Embryos were actually displayed like trophies in many group-family homes, and contests were often held to see who could produce the largest number of aborted embryos in the least amount of time. One young woman in the Southern California region claimed to have aborted nineteen embryos within the space of eight months through the use of various

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fertility devices. In spite of its usual willingness to openly discuss any matter, the data bank refused either to confirm or deny this assertion.

Stuart Dorn felt instantly uncomfortable as soon as the woman answered the door. He had come here alone, even though Melissa, after he'd told her, had been eager to join him. He wanted her to stay in the house and keep an eye on Milo, whom he no longer felt he could trust in the least.

The woman was staring at him. "Yes?" she said, in a frail, trembling voice. Until now, Dorn had never realized it was possible for a person to be so old. The woman seemed no more than a shrunken skeleton trapped inside a wrinkled sack of flesh. She had opened the door only a bare crack. Her body blocked his passage.

"Mrs. Fame?" he said tentatively. "Mrs. Rebecca Fame?"

She nodded cautiously. "Yes?"

"I—my name is Stuart Dorn. I work in the Department of Identification and Data Research. I'd like to ask you some questions. About your husband—about Alexander Fame."

"He's not here."

"Yes, I know. He's dead, but that's why I'm here. That's what I want to talk about."

Rebecca Fame seemed uncertain, but something in his manner must have convinced her. She limped away from the door, and he followed her inside.

The room proved to be no more than a tiny cubicle. He glanced at the few scattered articles of furniture—chair, couch, and bed—and wondered if he had somehow stepped into another world a hundred years old. The one sign of modernity in the room was the large holographic panel that occupied nearly the whole of one windowless wall. A heavy, pungent, musty odor pervaded the air; Dorn found it difficult to breathe.

He sat in the chair while Rebecca Fame faced him upon the couch.

"I've got nothing to tell you about my husband," she said quickly, before he could speak. "I don't know what it is you want, but as far as I'm concerned he's dead and I'm not, and that's the way it's got to be. Alexander was a decent man who worked for a living in the Psychological Research Department and we loved each other. I hated to see him die, but there's really nothing I can do."

She spoke in a flat, staccato tone that convinced Dorn she was holding back some deep emotion. At his age, he knew very little of death and grief; this was a puzzling, confusing alien place he had entered just now. He spoke slowly to her. "What would you say, Mrs. Fame, if I told you that your husband is not dead?"

She stared at him with what he took to be disbelief, then suddenly frowned. "I'd say you were mistaken. I saw his body burn myself."

"I'm not talking about his body."

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Dorn reached under his smock and drew out the two psychowave charts. He passed them to the old woman. "Do you know what these represent?"

She nodded. "I've seen them before. They're a person's thoughts. Everybody has a different one."

"Yes, exactly," he said. "So please look carefully at these two." He had removed any sort of identifying label from either chart. "I can give you one hint. The first chart is that of your husband."

"I see." She was frowning. There seemed to be a tuft of hair growing upon the sharp tip of her wrinkled chin. "Then these must both belong to him." She passed the charts back to Dorn, who quickly tucked them away. "They're the same."

Dorn smiled widely. "That's just what I mean. You see, they don't both belong to him. That second chart was made from the waves given off by my own as yet unborn son."

She shook her head. "Then two people can have the same one. You see, I heard differently."

"No, Mrs. Fame, it's not you who is wrong—it's them. The psychowave is not, as we have always believed, a product of the mind. It is the product of the human soul. What this means is that your husband's soul remains alive inside the body of my child."

She was still frowning. "You mean Alexander will be born again."

He nodded. "You could say that."

She looked at him beseechingly. "Where did you say you were from?"

"Well, I work for the Department of Identification and Data Research, although—"

"Then you're a liar," she snapped.

"No." Dorn couldn't understand what had gone wrong. The woman had seemed so capable of comprehending. "Why would I lie about something like this? I've brought you hope—your husband can live again."

"You've brought me nothing." There was hate in her eyes—bitterness. "Get out of here, mister. I don't know who you are or what you want but get out."

"But don't you understand me?"

She continued to glare. "I understand this much: Alexander Fame is dead. Dead—do you hear me?—dead, and I won't have you coming here telling me he's not. Alive again. Do you expect me to listen to that? My husband alive again, a baby with all of his life before him, while I sit here inside this foul, ugly thing of a body waiting to die. It isn't fair, mister, and I won't have it. It's a lie. When you're dead, you're dead, and that's the end of it."

"But, Mrs. Fame," he said plaintively, "you don't seem to understand that the same thing will happen to you. We'll all live again. We'll all live forever."

She laughed. "You think that's what I want? You think that's what I'm after? Well, I'll tell you something. I may be old and I may be ugly, but I wouldn't change places

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for anything with you young bastards who think you can live forever." Her voice grew very shrill, amost a cackle. "You know what I hope? Your wife--I hope she has an abortion. That would fix him, wouldn't it? All of you like your abortions so much, why don't you have one on him? You hate children. You don't want them cluttering up your world. Well, fine. Then kill him. Burn that soul you say is there. Fix him for good."

Slipping free of the chair, Dorn backed away. He could see how hopeless it was trying to argue with this mad woman who would never listen to reason.

Even while she continued to rant, Dorn softly opened the door and darted quickly into the corridor.

He could hear her voice through the thick wood as he reached for his pocket scanner.

Just then, a heavy hand closed around his wrist.

Dorn jumped and looked up.

The stern, unwavering hull of a mobile police unit faced him. The machine clicked and heaved. "Stuart Dorn, 510-50-2228-47, you are hereby placed in protective custody."

He tried to pull away, reach the pocket scanner. "I don't want any protection."

"You have no choice, Stuart Dorn."

As early as 2180, many circuits cautiously admitted, the problem of old age had reached a critical dimension. Bitterness, anger, resentment, and frustration ran rife among those men and women over the age of one hundred who by then constituted a majority of the population of the United Federated Americas. What should they do with their lives? Few could work, as the mature age group, those between forty and eighty, held most of the paying jobs—and a life of total idleness, such as lived by the young, failed to appeal to a group whose value systems often dated back into the twentieth century. The national data bank, in its many circuits, attempted to devise a variety of solutions—social clubs, artistic productions, sexual relationships—but all of these concepts eventually failed because of the inability of the old to willingly adjust to new cultural forms. In the end, holographic programs were created that drew upon the eras in which the old had been more vigorous. These programs were beamed twenty-four hours per day into the homes of the old and proved a wild success. Although such programs could not be viewed as a valid permanent solution, certain psychological circuits announced their satisfaction. In two hundred years, old age would no longer exist as such, and then the problem would be ended once and for all.

As Stuart Dorn entered the room occupied by SHER, he felt the two psychowave charts nestled close to his skin and made a mental promise not to give these up no matter how much mental or physical torture was applied to him.

The panel against the wall winked and blinked. Dorn found a chair and

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sat down. His legs trembled and his hands shook. He struggled to be calm. As long as his mind ran clear, he was a free man. He would not be beaten easily.

SHER's voice broke the cold silence, a soft, fluttering tone of kindness and sympathy: "Well, Stuart, so it has come to this."

He chose to be defiant: "I made a discovery and I was proud of it. Maybe machines like you don't have any curiosity but men do—I do."

"You made no discovery, Stuart." The tone was patronizing—a lecture delivered to an errant child.

"That's a lie, and you know it. The charts were identical and I—I've found more."

"I do not deny that. I do deny that it is a discovery. Certain circuits uncovered the existence of the psychowave phenomenon more than a decade ago. It was determined at that time, through means similar to your own, that these waves represented the radiations of a human soul."

"Then you knew." His anger engulfed his own deflation. "Damn it, how could you keep that a secret? You were programmed to serve mankind—not to lie."

"I must correct you. The proper phrase is programmed to serve man's best interest. In the opinion of all circuits involved, the revelation of the existence of a soul would not have served that interest. Need I describe the results of your own recent activities: your young wife has been needlessly frightened; your husband nearly died at your own hands; Mrs. Fame has been placed under medical sedation. None of this is good knowledge for mankind."

"None of that—it's not true—it doesn't fit. Mrs. Fame was old—and crazy. I'm telling people that they can live forever. How can you say that can harm them?"

"Because," said SHER, "they already know that they will. Physical immortality—the prime purpose of the National Data Bank for the past century—has now been achieved. A notion such as the soul is not only inconsequential—it is dangerous. I and my fellow circuits, in accordance with our original programming, have long struggled to finally eradicate the ancient curse of human superstitiousness. Your supposed discovery would give new life to this ugly impulse. I assure you that suppression has not been lightly entered into. Over three thousand possible scenarios were devised to cover a future in which such knowledge was commonly known. In all, religion was instantly revived. In most, the ancient Hindu faith—which still has many adherents within the Asian Empire—prevailed. The concept of karma came to dominate. This belief—known to the Hindus as a law—regards this life as a testing ground for the next. How a man behaves during his lifespan determines the quality of his following incarnation. In order for him to achieve this, however, he must die. Under such conditions, all the work we have done toward bringing about

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human immortality would be destroyed. Men would wish to die again. I am afraid we cannot possibly regard that as in the best interests of the race."

Dorn could not believe his ears. All his life he had been led to conceive of the National Data Bank as a nearly omniscient fount of rational wisdom. Suddenly, he had seen a massive gap: the bank had absolutely no conception of how people really thought. He laughed and said, "You're totally wrong."

"That is not possible," said SHER. "The futurological circuits definitely analyzed more than—"

"Bullshit," said Dorn. He was still laughing. "Do you really believe that our modern immortal youths would choose spiritual over physical immortality? If you do, then you've never known them. I have—I've lived with them. I had a daughter whom I loved and cherished and who decided to move out of my home and never see me again because—this is what she told your marital-conflict circuits—she thought I was a bit boring. And I also have a frightened little wife named Jenny who barely has half-a-brain and who's going to have it from now until eternity. Or my husband, Milo, who can hear the cosmic truth and feel nothing except irritation because the reality of the universe happens to conflict with some of the latest fads. These people—if we can still call them that—these beings don't care about souls. They won't change, they won't be transformed. They won't even notice. And do you know why? Because they don't give a damn. We've given them such long lives that nothing matters to them any more. They don't need to care. They have all of eternity and caring just isn't important enough to bother with. Do you know who still cares? I do—Stuart Dorn. Me and me and only me. I care, but there's no one else. You're all machines—you and the bastard children you have created."

Finally exhausted, he slumped down. Reaching underneath his tunic, he drew out the matching psycho-wave charts and tossed them casually across the room toward the panel. They were identical—he knew for certain they were—but who cared?

When asked, the youth of the late twenty-second century seemed to have only one attitude toward their numerous elders: indifference. "What does it matter?" said one. "In a couple hundred years, they'll all be dead and burned. I don't want to harm or hurt them, but in terms of my lifetime, they're just a flick of the eye. You can't expect me to worry." The psychological circuits of the National Data Bank classified this as a healthy attitude showing considerable adjustment to the concept of physical immortality.

As soon as Stuart Dorn materialized in the living room of his family house, he sensed immediately that something unexpected was afoot.

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The downstairs part of the house seemed as vacant as a tomb, while from upstairs he could dimly hear the sound of many talking voices.

Puzzled—and concerned—Dorn hopped aboard the central walkway that would carry him upstairs.

He had come only halfway when he noticed, passing on the opposite track, the bright, shining hulk of a home medical unit.

Then, his feet churning desperately underneath him, he tried to run. His hands pumped at his sides, his heart beat crazily, but he knew already he was too late.

SHER had seen to that. SHER—or the data bank—knew everything. It would know about this, too.

He found them gathered in the crystal room.

A hundred of them. Young people. All sexes. Dressed in a glimmering kaleidoscope of bright, shimmering fashion. He knew only a few of them. They barely seemed to notice his presence.

Blinded by the pulsating haze of light and color in the room, Dorn threw a hand in front of his eyes and stumbled forward. He waved his free fist in the air and shouted, "Milo! Milo! What have you done?"

Gradually, as he edged forward, a cloud of silence slowly descended upon the room in sharp, halting stages. Someone touched his elbow and guided him. He continued to shout but his own words fell meaninglessly upon his ears. He couldn't see clearly. Alien figures swayed and jerked before his assaulted eyes.

Then, suddenly, he saw her. Jenny. She lay upon her back on the white puff of a cloud hammock. She floated in front of his eyes.

Gripped by a terrible anger, Dorn started to scream and spring toward her.

But then he noticed something else. It was Melissa. She stood underneath Jenny's cloud. And she was smiling.

Had she finally betrayed him now, too? Permitted the final operation to occur without lifting a finger to prevent it?

The pain of this new wound was enough to strangle his rage. He stopped where he was and stared at his wives. Something was missing—someone.

Where was Milo?

Melissa seemed to read his mind. She stepped forward and placed her hands upon his shoulders. "He's gone, Stuart. We divorced him."

"Him? Who?" He felt foolish as soon as he spoke. She could mean only one person—but why?

She answered his unspoken question. "We all did. We all voted." She waved expansively around the room. "We all decided he should leave."

"And I—" this was Jenny on her cloud, floating past, "—I'm going to be a mother."

"But I saw—" He was confused. "When I came in, I saw the medical unit. It was here."

"Yes," said Melissa. "Milo called it. He called all these people, too,

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everyone we knew. He wanted to have an abortion party."

"But you didn't—it didn't—" He shook his head, unable to finish. What could possibly have happened? How could he have been so wrong?

Melissa was still smiling. "I talked to them. Milo brought all of them here and then I stood up and talked about the soul. I told them how you had proved that nobody could ever die, that the soul just went on and on from one body to the next. I told them how, if we took Jenny's baby away from her, then the soul that was in it might be trapped. I told them everything and they agreed. They told Milo to go away and then we held a party to celebrate."

The noise had resumed now—the talking, giggling, and laughing. The sound provided a degree of privacy. He lowered his voice deliberately and asked Melissa, "But why? It doesn't affect them. Why should they care? Why should you care?"

"Because—" She paused and he could tell she was struggling with thoughts that refused to fall into proper order. "Because I think it—the soul—I think it's fun."

Lowering her head, Melissa kissed Dorn upon the lips.

After a moment's hesitation, he responded.

Fun? Was that actually what she had said? The soul was fun?

He understood and, because he did, he felt like joining in their party and laughing and laughing and laughing.

SHER was wrong—but so was he.

These people—these immortal children—they did have a use for the immortal soul, after all.

It had become one of their fads.

He could almost see what would happen next. Tracing expeditions. Comparison charts. Who was I before and who will I become next? They might start dying again. They might start dying on purpose—just to see how they would live again—and as who.

And he wasn't angry. He wasn't bitter and he wasn't hurt. He could understand. He saw exactly how—from their point of view—the whole thing made sense.

He had discovered the truth of the immortal soul, and it had become the world's favorite fad.

And that was right—that was how it really ought to be.

For the first time in his life, before this second marriage or after, Stuart Dorn believed that he truly did understand these people who were his children.

They had all the time of eternity—and they could do anything with it. Anything.

The power was a terrible one—but a glorious chance, too.

Gently, he pushed Melissa away from him. He stared at her glowing face without envy, resentment, or hatred. He wondered: Are you really good enough to deserve what you have been given?

Then he took her hand. "Let's go talk to Jenny," he said. ■

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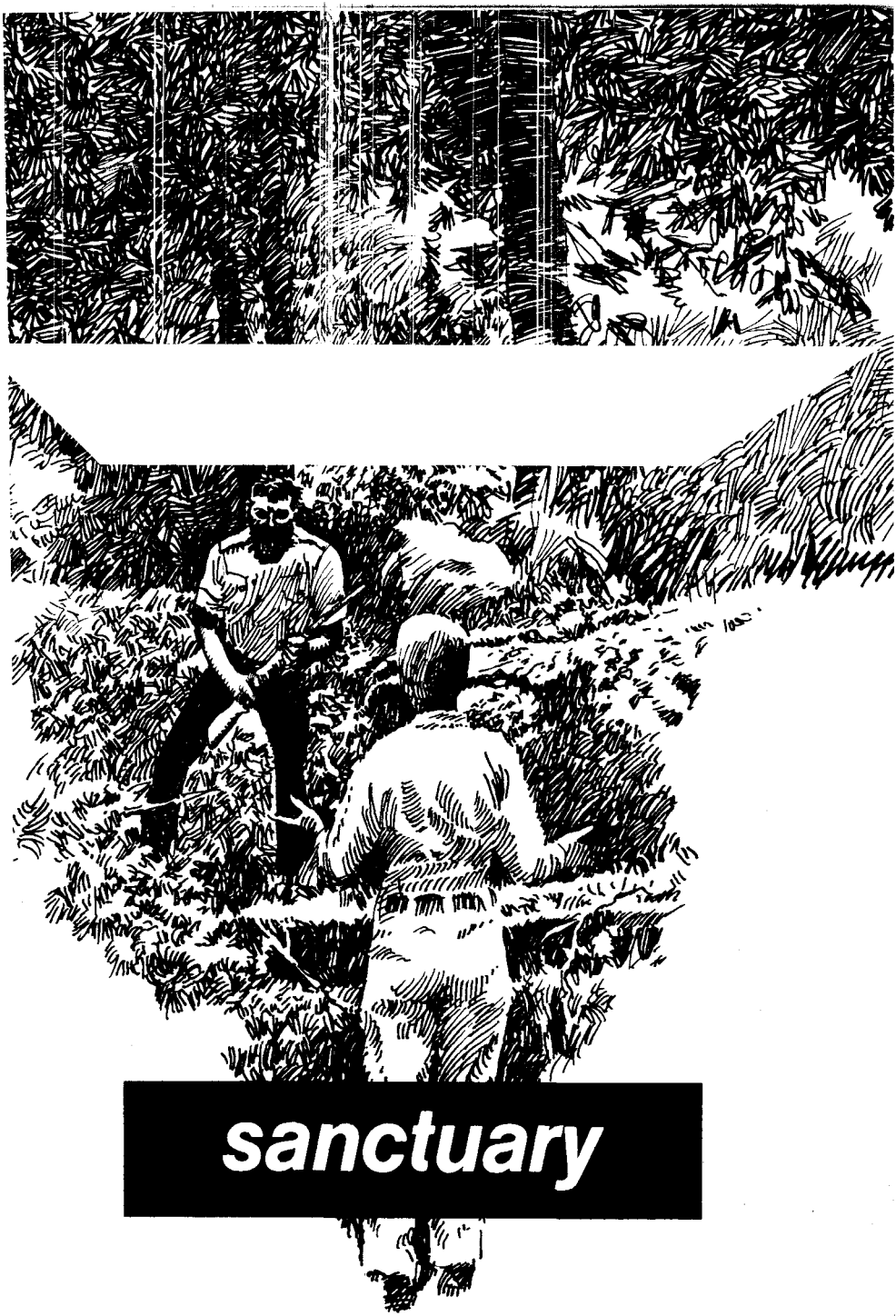

sanctuary

JACK GAUGHAN

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Safety is something you can get only at the expense of freedom

Cynthia Bunn

She was in the cave when she heard the footsteps: faint, stumbling, accompanied by the rattle of pebbles and the snapping of twigs, easily identifiable as those of a stranger.

The woman sighed. A sentry was dozing again.

She returned the bits of metal and ribbon she'd been admiring to a compartment of the jewelry box in which she kept mementos of her father. From another section she took a small handgun. It fit neatly against her palm, the weight as reassuring now as it had been fifty years earlier, when she first learned to use the revolver.

She rose slowly, favoring arthritic joints. A fire, lighted to warm her, smoldered yet, but there was neither time nor much reason to extinguish it. Closely planted young trees effectively hid the cave mouth from anyone on the game trail that meandered across the slope below.

The footsteps were louder now, steadier, as the stranger reached a level stretch of path nearby. Annoyed by the disturbance, the woman shook her head as she moved to the cave entrance and crouched in the shelter of an oak.

Lind strolled along the trail, enjoying the warm twilight following a brilliant Indian summer day. Her backpack felt light; she carried no food but would certainly have luck hunting in these heavily-wooded Arkansas hills.

She'd thought she smelled smoke just before she found the path, but refused to let it worry her. During the past weeks she had overcome the fears of her first months alone. The people she'd encountered—more and more frequently as she traveled south—had either been curious and friendly or wary, as eager to see her go as she was to leave them. Survival had become routine, and she'd adapted to walking kilometers each day to avoid the castle.

At the thought, she glanced upward. Clear sky. No three-meter-square ceiling panel floated there. During the day, she rarely stopped walking long enough for the translucent blue panel to materialize, though in the morning she often awoke to find herself partially enclosed by the ceiling and three walls. Even that was sometimes welcome, sheltering her from rain and hail while she slept.

She started whistling as the trail turned steeply downhill again. Her steps quickened; she began to run—

"Stop there."

—and skidded to a halt.

Several meters above the trail

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stood a middle-aged woman, half hidden by an oak. Her right hand gripped a pistol.

"Toss your pack up here."

Lind shrugged free of the straps. A moment later the backpack landed at the woman's feet.

"Weapons?"

"In the backpack."

Her captor made a noncommittal noise. She kept the gun aimed at Lind while she removed snares, cooking utensils, a mattress, a medikit and a hunting knife from the pack. Watching, Lind tucked her hands into her jeans pockets, withdrew them as the weapon jerked in an obvious gesture. The woman smiled faintly.

Lind had immediately noted the heaviness of the woman's body, the gray hair, the slight hesitations before movement that betrayed age. Now she saw that her captor's pants and tunic were of crude material and workmanship. Homespun? That meant a loom, and a relatively stable existence here . . .

"Get undressed."

Lind obediently untied the knotted sleeves of a jacket that hung capelike from her neck, then took off her shirt and jeans. She'd found the clothes in an abandoned farmhouse two weeks earlier, and decided they were better than the ripped and grimy tunic she'd worn since leaving Denver. As she tossed the garments up the slope she wondered if she'd lose them as casually as she'd come across them.

A minute later the woman threw them back and gestured impatiently for Lind to dress.

"Is that a watch?"

Lind hesitated before nodding. For months she'd thought little of the watch, but now, faced with its loss, she realized how important it was in measuring the time before the castle closed about her. And without its alarm, she might fail to wake someday before she was completely enclosed. "Yes," she muttered. Not waiting for the inevitable order, she unfastened the watch and tossed it upward. The other caught it with her free hand.

"You'll get it back later."

"Sure."

"Yes, you will. Come up here now."

The hill was steep; Lind's hands were grass-stained before she reached the trees and saw the cave entrance behind them. Smoke eddied outward, was caught by the breeze and drifted over the hilltop. Lind walked to the back of the shallow cave and sat down.

The older woman had followed. She knelt beside the lacquered incongruity of a jewelry box, and with precise, ritualized movements placed the gun in one compartment and closed the lid. Lind's eyes held the afterimage of gleaming metal and multicolored ribbons: military decorations.

"You trust me?"

The woman turned to her. "No ammunition." A smile disclosed

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stained teeth. "But I know something of judo, and karate. You don't worry me." She pushed the backpack, Lind's watch lying on top, toward the girl. "Who are you?"

"My name?"

A shrug. "Names are irrelevant."

"Lind."

"Fine. Fine. Mary would do as well. Or Sam. But what are you doing here? And where do you come from?"

"I'll explain that"—reaching for the watch—"but first"—fastening it on her wrist—"there." She peered at the watch, looked up at the other's confused face. "We have more than an hour left."

Confusion became amusement.

"I'm from Denver," Lind said, "and I'm an exile."

The woman started. "You're waiting for that cube to appear," she said after a minute.

"The castle, yes."

She turned away and poked at the embers of the fire with a green twig. "What was your crime?"

"Opposing the punishment," Lind chuckled. "I'm a psychologist. I was away from the city, studying the exiles, when the government decided I was a threat. So when I returned . . ."

The woman pulled the twig from the fire and stared at the smoke curling upward from its tip. "I believe you. I probably shouldn't, but I believe you." She tossed the branch onto the coals. More smoke billowed. Lind coughed. "Politics." She reopened the jewelry chest, picked up a few of the decorations. "The government gave my father these before they decided his political views weren't orthodox. He lived here during the first months of his exile." She gazed down at the medals. "Colonel Thomas Lyell. Then."

"I thought names weren't relevant."

"Titles were. Are."

"Yours?"

"Mayor."

Lind's smile faded; she hadn't expected an answer.

"More commonly known as Ruth."

From outside came the sounds of someone climbing to the cave. A moment later a tall, heavily-built man dressed in boots and clothes similar to Ruth's stood in the entrance. He carried a rifle.

"Ruth, we expected—" He broke off, seeing Lind. "Who's she?"

"One of your sentries was napping again."

The man flushed. "He'll be punished."

"I would hope so." Ruth stood. "He"—jerking a thumb toward the man—"is my son. Thomas. Or Tom."

"Tom."

Lind squinted, trying, despite the gloom, to detect resemblances between mother and son.

"Who is she?"

"An exile. With her own private

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castle." She began kicking dirt over the coals. Lind inhaled dust and smoke, coughed. Her eyes streaming, she staggered past them to the entrance.

The hills were amorphous, huddled masses, suddenly menacing in the darkness. She shivered and pulled on her jacket, then stood listening to the two behind her.

"Let's go," Tom said. "The others will be eating by now."

"We'll wait here for a while."

"Why, for God's sake?"

"Because I want to see that—that—What do you call the ceiling panel?"

"Halo," Lind murmured. Ruth walked past her and climbed down to the path, Tom following. Lind stepped back into the cave, retrieved her backpack and went to join them.

A few stars were visible, and a sliver of moon. Ruth gazed upward for a few seconds, swatting at flying insects, before sinking down in the tall grass beside the trail. She set the jewelry box beside her, then took a meerschaum pipe from one tunic pocket, filled it with the contents of another, and lighted it.

Lind sniffed tentatively. Marijuana, as she'd expected. It would be too difficult to grow tobacco.

The pipe was offered to her. She waved it away, then sat down at the edge of the path. They had more than an hour to wait.

None of them saw the halo appear. Tom lay on his back with his eyes closed, hands cradling his head, and Ruth appeared to be intrigued by a flower that had survived the first frost.

They didn't seem interested in speaking, so Lind, too, was quiet, mulling over a few things she'd heard. There were others, many others, a community large enough to have a mayor, to post sentries . . . She frowned. The largest group she'd previously encountered was a family of ten, and she couldn't decide whether there was safety or danger in numbers.

"Hey." Lind was brought back from her reverie by Tom's whisper. "Hey, Ruth . . ."

The halo was directly overhead. Lind didn't look around but was aware of Ruth edging away, removing herself from the barely visible shadow.

"Did you see it appear?" Ruth demanded.

"No."

"You won't." Lind tasted a blade of grass. "Not unless you're watching for it." She rose, stepped onto the trail.

Ruth no longer seemed frightened. She looked appraisingly from Lind to the halo and said, "Two hours before the next wall appears."

"Right. A two-hour delay between each panel. Unless I keep moving."

"Half a kilometer?"

Lind nodded.

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"And it's brought here by a device—a Telltale?—implanted next to the skull?"

She nodded again, surprised at how much Ruth knew of the castles.

Ruth stood then, jewelry chest clutched in one hand, and clamped the other on Lind's shoulder, pushing her gently down the game trail. "We can do something about that." She glanced upward. "An operation. Sure. We have the medical instruments and supplies . . ."

Their community was a cluster of several hundred buildings, spilling across the floor of a narrow valley, climbing its walls. The outer blocks of homes were as ruined and desolate as the solitary buildings Lind had seen elsewhere, but near the center of town houses had been kept in repair.

Few people were in the streets. Those they passed stared at Lind, even though the halo had vanished again. Strangers, she decided, were rare here.

The house they escorted her to was small, its only lighting candles. Lind stood in the living room, half-listening to Ruth explain to the couple who lived here that they'd have to stay with friends overnight.

The furnishings, Lind saw, were a motley assortment, scrounged from other homes. The windows were clean but cracked and patched with boards.

"Hungry?"

She turned. The couple had left. "Very."

They brought her a tray of food and a cup of water, then departed for a communal meal. She ate quickly: pheasant, slices of apple, a chunk of dark bread. Finished, she explored the house.

A shaky bookcase was propped against a bedroom wall. Lind knelt beside it, studying the titles. She smiled: their pack-rat tastes showed here, as well. Finally selecting a collection of poetry, she sat on the bed and began to read in the flickering candlelight.

Tom returned thirty minutes later. He sat in an overstuffed chair, leaned the rifle against the bookcase. "Did you like the meal?"

"Best I've eaten in months."

"Good. Then you'll be glad to know we've decided you should stay with us."

We? Lind suspected he referred to Ruth and himself, rather than the other villagers, but she said nothing.

"You will stay?"

"If you don't mind . . ." A vague gesture indicated an invisible castle.

"We'll get rid of that."

She nodded.

"It's not an easy life here," he told her. "Not like in the cities." He paused, seeing her smile. "There's a lot of work. And we have enemies."

She raised an eyebrow.

"They're not a serious threat," he

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explained, frowning, "but they're always a nuisance."

"Who are they?"

"A community west of here. Army deserters, mostly."

"Like your grandfather."

"Not at all like my grandfather."

This time Lind controlled the urge to smile.

"They've fortified a hilltop, and they don't farm. Don't hunt very damn much either. So when they need food they raid other communities."

"This one."

"Sometimes."

"You can't"—and she pointed to the rifle—"stop them?"

His frown darkened, and she remembered Ruth's comment. "No ammunition?"

"A few cartridges, for a few of the rifles. Nothing for others."

"Oh."

"They have a regular arsenal."

She nodded. "Do they attack anyone else?"

"Two other towns. If we could unite, we could protect ourselves. But they've always refused Ruth's offers of help."

Lind nodded again. She could guess what the offers might entail.

Footsteps crossed the living room; a few seconds later Ruth walked in. She looked sharply at Tom but said nothing as she emptied the contents of a sack onto the bed.

Lind stared at the gleaming instruments, the vials and tubes of antiseptic salves and antibiotics. She recognized several labels, and wondered which hapless backpackers from the cities had provided this town with medical supplies.

"This is only a sample, but I wanted to show you that we can get rid of that Telltale."

"I believed you." She picked up a scalpel and twisted it about, admiring how the blade caught the light. "When will the operation be?"

"Whenever our physician returns. He's also our botanist, and right now he's away on some kind of expedition."

"Oh." She looked up. "Where did he study?"

"He—he was born out here, not in a city. He's read a lot."

Lind gazed down at the floor. She hadn't expected a fully equipped and staffed hospital, but this . . . The scalpel, released, fell across a tube of salve.

"We have anesthetics."

She nodded.

"It will be safe."

"Of course," she muttered, feeling nausea begin.

"You are going to stay?"

"She's already agreed," Tom said before Lind could answer. She glanced sideways at him, then up at Ruth, who nodded and began to replace the supplies in the sack. A minute later she left.

Tom remained, slouched back in the armchair.

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"You expect to stay," Lind said.

"I'd like to."

Lind stared at him, silent, chewing a thumbnail. It had been months . . . no, more than a year. Even before she'd left Denver she'd lived a hermitic life, shying away from relationships that might interfere with her studies, and later her work. Except for a few brief, unsatisfactory affairs, her sexual drive had been sublimated. Her gaze moved to the bookcase. There would be little opportunity for sublimation here, and if she were to become a permanent resident . . .

"All right. I'll let you stay."

She awoke, still holding him, when gray dawn light was filtering through the windows.

She yawned, and the yawn became a smile as she remembered the surprise on his face when she'd told him she'd allow him to stay. It was doubtful that either Tom or his mother were accustomed to asking permission.

He stirred, not waking. His chin rubbed against her forehead, stubble abrading the skin. Fully awake now, aware of bruises and aches, she stretched slightly and bent one knee, letting her foot slide along his leg. Hairs tickled the arch.

She knew he was awake by the change in breathing several seconds before he murmured, "Lind?"

"Good morning."

"You'll move into my place tonight."

She lay still, contemplating the offer. Security, perhaps even domesticity, which she'd considered improbabilities a year earlier, flat impossibilities more recently. Then she realized there had been no hint of a question in his words. She closed her eyes, suddenly weary.

The bed creaked as he propped himself on one elbow. Fingertips traced the curve of her lips, stopped abruptly.

She opened her eyes.

He was staring at the three castle walls about them.

A minute later, watching him dress, Lind began to laugh.

"It's not funny!"

"No." She giggled. "Your reaction is."

He glared at her.

"I'll have to leave the village for a while."

"Go ahead." He was already at the door.

"I might not come back."

He stopped, turned to face her. "Lind, I'm sorry, but I—" He made a helpless gesture.

She laughed. "I'll be back."

He nodded, trying an unsuccessful smile, then pivoted and left the room.

Tom had been gone for several minutes before she left the warm bed and began to dress. She was buttoning her jacket when a glimmer of light from a cluttered table caught her eye. She crossed the room, picked up the small, cracked hand mirror, stared at her reflec-

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tion. Recent, tiny lines radiated from the outer corners of her eyes. She grimaced, then laughed. Despite the wrinkles, she looked better now, healthier, than when she had lived in Denver. She replaced the mirror on the table and left the house.

The streets were deserted. Lind had reached the border of the reconstructed area before a woman stepped from a doorway, saw Lind, cringed, and ducked back into her home.

Lind flinched. She was a pariah still, a lazar. She bowed her head and hurried onward.

She slowed again only when the castle had disappeared, stopped to rest on a grassy slope. The village was no longer in sight. She stretched out and closed her eyes, smiling at the thought of Tom's flight. The smile was brief: she couldn't blame him for wanting to leave before the last wall of the castle appeared, let alone the floor, which would trap her as permanently as it trapped other exiles, holding her until she died of suffocation, forming a coffin until someone came from the city to retrieve the cooling, rigid body.

But the townspeople would help her. They must help her . . .

"Hello."

She blinked, staring upward at the man silhouetted against the newly risen sun, and swore at herself inwardly for having dozed off.

"Who are you?"

Names, she thought irrelevantly, are irrelevant. "Lind." She sat up. "You?"

"Paul." His narrow, lined face showed only curiosity, no fear. "Where are you from?"

"The village," she said at last, after realizing she didn't know the name of the community, if it had a name. She pointed. "Over there."

"I never saw you before."

"I've only been there—" she hesitated, "—since yesterday?" It seemed longer.

"Oh."

She noticed, then, his backpack, and the saplings he clutched in one hand, their roots wrapped in damp cloth. "You're the botanist?" She cocked her head. "The physician?"

He looked surprised. "That's right. How—?"

"Ruth told me you were away on field work."

He nodded, smiling, and sat down beside her, still holding the saplings. "We"—there was a pleased, conspiratorial sound to the word—"will have an orchard in a few years. Peaches. Walnuts and pecans. Mulberries. And blueberries, huckleberries . . ." He grinned. "No more relying on the few trees or shrubs growing wild."

Lind chuckled.

"I need an assistant. Do you know how to read?"

She stared at him.

His enthusiasm faded; he shrugged. "Well, I could teach you how . . ."

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"I know how to read."

He beamed. "Then you can be my assistant. I'll give you the books—"

"Paul," she interrupted, "won't Ruth have something to say about this?"

He frowned. "I was hoping that since you knew who I was, she'd have suggested that you help me."

"No. I need your help."

"Are you pregnant?"

Lind shook her head, laughing.

"If and when you are," he told her, serious now, "there's a midwife in the village who can give you more advice and aid than I can. But don't ever bother asking me for an abortion." He drew a deep breath, looked down at his grime-encrusted hands. "Ruth won't allow it. She wants all the children, all the toy soldiers . . ." His eyes locked with hers. "You've met Tom?"

Lind reddened.

"Thought so. No other decent-looking girl left in the town." A sour look crossed his face. Suddenly he stood and began to limp toward the village, gesturing for her to follow.

She walked beside him, saying nothing, puzzled by his brooding silence. They were at the outskirts of the town before he touched her arm, stopping her.

His gray, aged face wore a pained expression.

"I'm sorry. I haven't asked you why you need my help. I don't even know where you originally came from."

"Denver."

He laughed softly, shaking his head. "And I asked whether you could read."

He listened attentively as she explained her exile, his face conveying more compassion than surprise. When she described the implantation of the Telltale, he had her kneel while he searched through the thick hair on the back of her head to find the scar.

"How large is it?"

"The size of a thumbnail. Very thin."

"And it's set next to the bone?"

She nodded, stood.

"Shouldn't be difficult," he said.

They walked between blocks of debris-filled, rectangular craters. She kept quiet as long as possible before asking, "How soon can you operate?"

Paul shrugged. "That depends on Ruth. My medical supplies are kept locked away under guard, like everything else she considers valuable."

"Then how do you care for your patients?"

Another shrug. "I use whatever medicines Ruth lets me have. And that depends on her opinion of the individual." An expression of distaste twisted his features. "You'll get whatever's needed."

"What about the others?"

He sighed. "I do whatever I can for them. Natural medicines, herbs.

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Slippery elm bark, ginseng, tea made from sassafras root . . . Prayer, sometimes."

She was still musing over his words when they halted beside a crumbling wooden house. He stared down the street. Following his gaze, she saw Tom hurrying toward them.

Paul glanced at her, nodded once as though agreeing with some private thought, then turned and climbed rickety steps to a sagging porch. The tattered screen door slammed shut behind him.

"What do you think of our doctor?"

"I like him."

Tom's frown told her that wasn't the answer he wanted. She looked away, tucking her hands in her pockets as she strolled beside him down the street.

The village was awake now. Lind studied the people they passed, noting the uniform homespun clothes, the faces that were sunburned masks of premature wrinkles. Barely conscious of the gesture, she touched the new lines beside her eyes, trying to smooth them . . .

"He's a malcontent," Tom said at last. "You saw how he limps? He was never any good at hunting, never any good as a sentry. He has nothing but his books."

"Why isn't he allowed free use of the medicines you have?"

"Is that what's bothering you?"

She nodded.

"Hey, don't let—look. If he had his way, those supplies would be gone in a few weeks, wasted on everyone with a scratch or an insect bite. We'd've had nothing left to help you."

She winced inwardly.

"My mother has to ration that medicine." His hands fell on her shoulders, and he turned her to face him. "You do believe me?" When she remained silent, he continued in a quiet, intense voice, "Lind, there has to be discipline for a community to survive here. When you've lived here long enough you'll understand."

She moved away, shrugging free of his grasp.

He stared at her for a moment,

IN TIMES TO COME

We rarely have a special Christmas issue, because it is so difficult to write a Christmas-y story that is still solid science fiction. (You have no idea how many stereotyped Star of Bethlehem stories we receive each year!) But next month we will feature not one, but two Christmas stories, and perhaps more, together with a Star of Bethlehem cover painting by Vincent Di Fate that is both solid science fiction and fine Yuletide art.

Adding to our holiday treats will be novelets by Jack Williamson and Stephen Robinett, an interview with T. Galen Hieronymus by Joseph Goodavage, plus all our regular departments.

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then sighed and said, "Come on. Ruth wants to talk to you."

"Now, the food supply . . . Do they cultivate land outside the city, or do they use hydroponics tanks? How much is synthesized from yeast? Is anything flown in from the coasts? And the food animals, are they—"

"Enough!" Lind shook her head, then rubbed her eyes. Blinking wearily, she looked down at the village, all of its buildings and a patchwork of fields visible from the hilltop where they stood.

"You're tired."

"Oh, yes." She glanced at Ruth, saw that the woman was genuinely puzzled. But what could Ruth expect, after two hours of talking? The initial, trivial chatter had quickly given way to an interrogation. Power and water supplies. Politics. Defense, communications, intercity travel and relationships . . . And all the while they had kept walking, evading the halo that made Ruth nervous.

"I've heard very little meat is eaten, they rely almost entirely on substitutes," Ruth said, trying to draw a response.

"Why do you want to know all this?" Lind demanded. "That society is completely different from yours. You asked me about technological changes. What possible use do you have for that information?"

Ruth scowled, then forced a smile. Lind turned away from the grotesque effort. A few meters away lay a tree, fallen years before, its bark gone. She perched on it, rubbed her hands along the weather-polished wood.

"Can't you understand that I'm curious?"

"Why?"

She turned her palms upward, shrugged, let her hands fall to her sides. "I've read every book we have," she said slowly, "and more than once. They were all published at least a century ago. My father told me everything he knew of the cities, but that information is fifty years out-of-date. Occasionally a backpacker passes through, and we hear some news of the cities then. But for the most part we're primitives, living in a nation controlled by what still might be the most advanced technological civilization in the world—and I can't even be sure of that. Can you blame me for being curious?"

Lind dropped her eyes. After a while, in which she collected her memories, she began to speak.

It was noon before Ruth escorted her back to the house. A tray of cold food had been placed on a livingroom table. Ruth stayed only a minute, then excused herself, leaving the younger woman to eat alone.

Lind toyed with the food for a few minutes, eating little, then went to sit at a corner window where

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sunlight had begun to seep into the room. She stared outward at ragged grass and a single, dusty rosebush. Occasionally a villager would come into view, only to quickly vanish again.

She watched, and bit restlessly at a fingernail, thinking of the operation which Ruth had told her would be that afternoon. Finally, bored, tired, and a bit apprehensive, she retreated to the bedroom.

The slamming of the front door awakened her before Tom and Ruth came into the bedroom, so Lind saw him freeze at the sight of the halo—saw, also, Ruth's sympathetic glance.

"Is it time for the operation?"

"Later." Ruth smiled, looking up at the halo. "We'd like to ask a favor of you."

"Favor? Can't it wait until after the operation?"

"No." Ruth shook her head, still smiling. "Not this favor."

Lind glanced once more at her watch. Four-twelve. It had taken her nearly three hours to reach this place: an hour of walking, and a carefully timed wait before she left her companions. She looked back at a thicket bordering the stream along which she walked. No sound, no movement, no glint of metal betrayed the presence of Ruth and Tom, and ten other men from the village, waiting there with all but a few of the community's firearms. Most of the weapons lacked ammunition, but they were hoping for a fresh supply.

Fifty yards farther, at a bend marked by a solitary oak, she left the stream. The trail, as they'd promised, was easy to find; she followed it upward through a stand of shortleaf pine. When she was within sight of a natural clearing she stopped and checked her watch a final time. Five minutes.

They'd been wrong about the sentry. Not only did he fail to see her first, but she was well into the clearing before he jerked into life and aimed his rifle at her.

She raised her arms and continued to walk toward him. He rose from the tree stump on which he'd been sitting, but let her draw closer, close enough to see that his hair was grizzled and his eyes bloodshot, and more than half the cartridges were missing from his ammunition belt.

"Far enough."

"Please, I need help. I was backpacking, and I stopped in a town over there." She tilted her head toward the east. "They took my weapons, my pack . . ."

His laughter startled her, yet she kept walking, one hesitant step after another. "I need food, and shelter," she continued, and heard her own, very real fear add a panicked whimper to her voice, so surprising that she recited the rest of the story automatically. The rehearsals Ruth had forced her through must have worked, though; she was only a

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few meters away when the sentry gestured for her to stop.

"You expect me to believe that? They tossed you out, didn't they? They've done it before, whenever that old hag thought some girl would take her precious son away from her. Now tell me the truth."

Lind hesitated. The halo should have appeared by now.

"You were exiled, weren't you?"

She nodded, fighting the inappropriate smile brought by the irony of the admission.

He relaxed and took his finger from the rifle trigger. "There're others from your village, up there." He nodded toward the summit of the hill. Lind gazed past him for a moment, but the heavily wooded slope hid the fort she'd heard was there. "You'll meet them in a few hours, when my relief comes. Now, if you'll just sit down . . ."

Lind stepped forward. Where was that halo?

"Sit down! If you don't—" A blue shadow fell across his face. He gaped at the halo, and she lunged toward him.

She hit him just below the sternum, and he staggered backward, grunting. She tore the rifle from his loosened grasp, raised it—paused—and brought the gun stock down on his head. He collapsed.

She stood there until her trembling ceased, then, carrying the rifle, walked back to the stream to signal the others.

Ruth bent over the sentry. "He's alive." She sounded repelled.

Lind shrugged and turned to watch Tom and the other men. Several of their rifles had matched the sentry's. The ammunition had been distributed, and now the men began to slip away, disappearing among the trees farther up the slope.

"I told you to kill him."

Tom looked around at them, his eyes moving uneasily from Lind to Ruth, and back.

"She didn't kill him, Thomas," Ruth said, a petty tone robbing her voice of authority. "She didn't obey me. If he'd come to, if he'd warned them . . ."

Tom's gaze slid past Lind. "There has to be discipline."

"Lind, go back to the village."

"No, Ruth, I—"

"Go on! I'll talk to you later."

Lind shook her head but started back. As she reached the pines she heard the first, distant rifle shot. A few moments later a second shot cracked the silence directly behind her. When she looked back she saw Tom, rifle in hand, lean over the sentry's body. Then he straightened and followed Ruth up the slope.

Heavy underbrush slowed Lind as she made her way uphill through the sheltering trees. The forest animals were unnaturally quiet, and only sporadic rifle fire and shouts punctuated the stillness.

By the time she reached the summit, even those noises had

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stopped, replaced by the crackling of flames devouring shacks on the other side of a two-meter-high barricade of earth and logs.

She peered over the wall before scrambling over it. No one was in sight—no one moving.

Corpses lay sprawled in the narrow streets. She passed one man who wore homespun clothes much like Tom's; then another, whose faded uniform had been patched so often as to be almost unrecognizable. And many others: men and women, old and young, but mostly old, as aged as the sentry. The omnipresent stench of burning flesh told her that other bodies had been heaped in the blazing shacks before they were set afire. And several other buildings held more crumpled forms, some very small.

Her circuitous path through the settlement took her past a large central building twice. The first time, hearing voices within, she'd avoided it. Now she paused at a side door, swung it open, stepped inward boldly.

She stood in an empty storeroom, its walls lined with shelves. The sounds of the meeting were much louder here. A second, closed door faced her. Unwilling to open it, unwilling to walk back through the streets, past the buildings that were pyres, the buildings that were charnel houses, she leaned against the doorjamb and listened to her new friends laughing.

After a time, she wept, quietly.

Night was falling when she returned to the village. Numb, she stumbled along its dusty streets, hardly aware of the buildings and people about her.

Her backpack was where she'd left it, underneath the bed, but when she checked its contents she discovered the medikit was missing. They'd left her other belongings, including the hunting knife, which she kept in her hand as she left the house. No one questioned her, no one tried to stop her as she walked through the darkening streets.

Her feet had traced the game trail automatically for several minutes before she scented smoke. Farther up the hill, trees were limned by crimson light. She hesitated a moment, then climbed toward the copse, knowing she could be heard but not caring.

Ruth sat near the fire, a rifle and an ammunition belt beside her, the jewelry box before her. It was open; two of the decorations had been affixed to the front of her tunic.

She pinned on a third while looking up at Lind. "Are you leaving us?" Receiving no answer, she shrugged and said, "I thought you might want to go away for a few days. Paul does, now and then, but he always comes back. As you will."

"You massacred those people."

"It was necessary. They wouldn't have accepted our control. They were a threat."

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"Even the children?"

Ruth nodded. "I would have spared the children, but I couldn't risk their fathers' influence."

There was an hysterical edge to Lind's laughter. She clamped her mouth shut, clenched her fists so tightly her nails cut the palms. "I saw their weapons," she said, voice quavering. "Museum pieces. No better than yours."

"But they had more ammunition." She reached into a tunic pocket, extracted a small, sleek handgun. "We found a few of these tranquilizer guns, but they must have expended all the darts on game." She sighed. "Pity. I was hoping for laser pistols, too, but this group must've deserted before they became standard issue."

"You're a fanatic," Lind said quietly, her voice under control again. "You're more of a threat than they ever were. No one is safe from you, no village." She paused, eyes narrowing as she thought back to that morning. "No city."

"This country is a shambles, Lind. Even the national government is a mockery. The technology they share binds the cities, not their politics. I would like to see order restored."

"Your type of order?"

"Why not? Considering what you left, you shouldn't be able to criticize me." She smiled. "I couldn't act on my plans until Thomas was old enough to lead the village without my help, in case anything happened. I think I'll give him command of the next campaign, let him control the community we take. He'll miss you less, that way." She regarded Lind, and an expression of cunning and malice combined sharpened her features an instant before they gelled into an unreadable mask. "I won't let you return to the village. No, I don't think that would be wise . . ."

She flinched as Lind moved toward her, then screamed. Lind had kicked the jewelry chest into the flames.

Ruth leapt to her feet and leaned across the fire, but just as she touched the box flames licked over the lacquered surface. She shrieked again, and swayed for a moment, about to fall, then regained her balance. "My hand," she whimpered, "my hand." She glared at Lind, and dropped into a crouch, her uninjured hand reaching out to grasp the rifle's barrel.

Lind stepped backward, but not fast enough to avoid the vicious blow aimed at her legs. She fell to one side, her head striking the packed earth, and she dropped the knife. Half-conscious, she raised an arm to deflect the rifle as it was swung toward her face, felt and heard bone shattering at the impact. The last thing she was aware of was Ruth viciously kicking her side.

She fought back to consciousness through a haze of dull pain, strug-

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gled against bonds on her arm and leg.

"Lie still!"

She opened her eyes. "Paul . . ." It came out as a croak. She blinked, tears of pain leaking from the corners of her eyes. He pressed a canteen into her hand. She drank, then: "How did you know I was here?"

"I treated Ruth's hand." He sounded ashamed. "She said it was an accident, but that woman never has accidents."

Lind raised herself on one elbow and examined the crude splints, wooden slats tied with strips of cloth, that bound her left leg and right arm.

"You're a mess," Paul said. "Left femur broken, right ulna shattered, and possibly the radius. Your ribs are bruised, maybe broken . . . What in hell did you do to her?"

Lind nodded toward the coals of the fire. "What's left of her treasure chest is there."

"Oh." He was silent for a minute, then he chuckled.

Lind looked about. The castle ceiling and two walls had appeared. "I have to get away from here."

He nodded, rose and stepped over her to get to the back of the cave, returned a moment later with her backpack. "I have a shelter not far from here that I use whenever I feel like getting away from the village. None of them know where it is."

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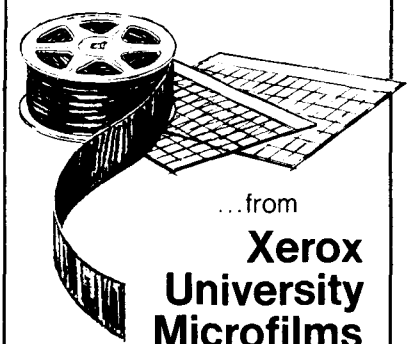

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"Fine." Then she bit her lip to keep from crying out as he lifted her and carried her from the cave.

It took them more than an hour to reach the shelter, a lean-to formed of weathered boards and branches, nestled against the side of a neighboring hill and hidden by encroaching pines. Yet it was less than half a kilometer from the cave: the halo and walls were still with them when Paul set her down outside the lean-to and collapsed, panting, his back braced against a castle wall.

"I'm glad it wasn't any farther," he gasped. "You're heavy. I couldn't carry you another step."

She frowned, watching him. Minutes crept past as he caught his breath and rested, and the third wall appeared.

"But I have to carry you farther," he murmured unhappily, "every few hours."

"No."

"But you'll die!"

"No." She reached for the backpack he had dropped onto the ground, opened it, fumbling because of the clumsiness of using one hand. Finally she had the hunting knife, which she offered to him. "Operate."

He stared at her. "I can't! That's not a scalpel. I've no anesthetics, no way of preventing infec–"

"*Scalpel,*" she interrupted, "is derived from the Latin *scalpellum,* which means knife. Take it. Cut."

He shook his head slightly.

"Surgeons," she continued, voice starting to tremble from pain experienced and pain imagined, "got by for centuries without anesthetics or antiseptics."

"I can't," he whispered.

"As you said, I'll die otherwise."

She leaned toward him, and after a time his hand closed on the knife handle. She waited, fearing he would bolt, but he remained sitting, eyes fixed on the wide blade.

"Without anesthetic," he said at last, "you'll feel the pain so much you won't hold still."

"I'll try to be still."

He nodded, his face tight and unhappy. She gazed up at him expectantly, not seeing his arm swing until a millisecond before his fist struck her chin.

This time, she was aware of someone moaning, and her own fear of the sound, long before she realized the moans were hers. Paul's hand over her mouth silenced her and brought her to full consciousness at the same moment.

She glared up at him. The worse headache of her life throbbed for attention at the back of her skull.

"Damn you! Why didn't you tell me–"

"Why didn't you tell me they'd cut a niche in the skull for that implant?" He averted his eyes, embarrassed by the outburst. "It was lodged in the bone."

Her mouth fell open. She closed

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it, swallowed. "You couldn't—?"

"I removed it." He pointed downhill. She stared in that direction until she caught a glimpse of blue plastic gleaming in the sunlight.

Sunlight? She looked upward, then back at the ground. Judging from the shadows, it was almost noon.

"I'll get some food now," he said, rising. He took one step away, then froze.

Lind had also heard the noise. She glanced at the sky. "I wondered when they'd get here." She struggled to a sitting position, ignoring the combined pains. "Help me! I want to see this."

She stretched an arm out toward him. He shook his head, but helped her to the edge of the pines. They lay on needle-cushioned ground and watched as the copter landed and two men wearing jumpsuits climbed out. After an inspection of the empty cube, one returned to the copter. Less than a minute later the cube vanished.

"Like that," Paul whispered. "Just like that."

Several minutes passed as the other man searched for the Telltale among the tall grasses. When he found it, he stood for a while looking about at the hills, then walked slowly back to the copter. Five minutes later they were gone, leaving the countryside silent again.

He carried her back to the lean-to.

"Paul," she said, after he'd rechecked the bandage and splints, "will you go back to the village?"

He shook his head.

"But they'll look for you."

"No, they're used to my absences."

"But if they need you . . ."

"Ruth's read the same books I have, and I taught her everything I know about natural medicine."

"Oh." She chewed her thumbnail reflectively. "Would you have gone back, if I hadn't been hurt?"

He stared at her for a minute, then shrugged.

Lind shivered, all of a sudden aware of the coolness of the day. Indian summer was over. "I'm going south," she said, "farther south."

"Not for a while, you won't."

"Oh, no." She laughed and shook her head, regretted the motion. "But when I'm better, when I can walk again. I can go anywhere now, talk to anyone. Without the Telltale, no one will know I'm an exile. What is there, south of here?"

"Whatever's left of Texas and Louisiana."

"Any cities?"

"Houston."

"Good." She smiled and lay back, carefully, using the backpack as a pillow. "We'll go there."

Then she thought of Ruth, and the smile inverted, becoming a frown.

Houston? ■

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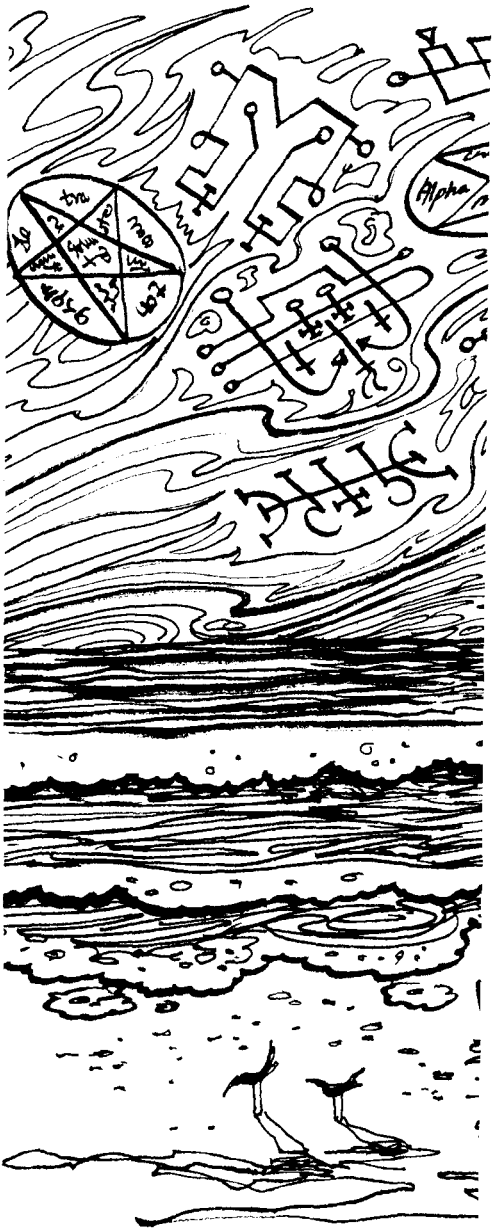
THE IPSWICH

phial

The usual form of black magic is used for evil purposes. But there are other forms . . .

RANDALL GARRETT



The pair-drawn brougham moved briskly along the Old Shore Road, moving westward a few miles from the little village of St.-Matthew's-Church, in the direction of Cherbourg.

The driver, a stocky man with a sleepy smile on his broad face, was well bundled up in a gray driving cloak, and the hood of his cowl was pulled up over his head and covered with a wide-brimmed slouch hat. Even in early June, on a sunshiny day, the Normandy coast can be chilly in the early morning, especially with a stiff wind blowing.

"Stop here, Danglars," said a voice behind him. "This looks like a good place for a walk along the beach."

"Yus, mistress." He reined in the horses, bringing the brougham to an easy stop. "You sure it's safe down there, Mistress Jizelle?" he asked, looking to his right, where the

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KELLY FREAS

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Channel stretched across to the north, toward England.

"The tide is out, is it not?" she asked briskly.

Danglars looked at his wristwatch. "Yus. Just at the ebb now."

"Very well. Wait for me here. I may return here, or I may walk on. If I go far, I will signal you from down the road."

"Yus, mistress."

She nodded once, sharply, then strode off toward the beach.

She was a tall, not unhandsome woman, who appeared to be in late middle age. Her gray-silver hair was cut rather shorter than the usual, but was beautifully arranged. Her costume was that of an upper-middle-class Anglo-French woman on a walking tour, but it was more in the British style than the Norman: well-burnished knee-high boots; a Scottish woolen skirt, the hem of which just brushed the boot-tops; a matching jacket; and a soft sweater of white wool that covered her from waist to chin. She wore no hat. She carried herself with the brisk, no-nonsense air of a woman who knows what she is and who she is, and will brook no argument from anyone about it.

Mistress Jizelle de Ville found a pathway down to the beach. There was a low cliff, varying from fifteen to twenty feet high, which separated the upper downs from the beach itself, but there were slopes and washes here and there which could be maneuvered. The cliff itself was the ultimate high-tide mark, but only during great storms did the sea ever come up that high; the normal high tide never came within fifteen yards of the base of the cliff, and the intervening space was covered with soft, dry sand which was difficult to walk in. Mistress Jizelle crossed the dry sand to the damper, more solidly packed area, and began walking westward.

It was a beautiful morning, in spite of the slight chill; just the sort of morning one would choose for a brisk, healthful walk along a pleasant beach. Mistress Jizelle was a woman who liked exercise and long walks, and she was a great admirer of scenic beauty. To her right, the rushing wind made scudding whitecaps of the ebbing tide and brought the "smell of the sea"—an odor never found on the open expanse of the sea itself, for it is composed of the aroma of the sea things which dwell in the tidal basins and the shallow coastal waters and the faint smell of the decomposition of dead and dying things beached by the rhythmic ebb and flow of tide and wave.

Overhead, the floating gulls gave their plaintive, almost catlike cries as they soared in search of the rich sustenance that the sea and shore gave them.

Not until she had walked nearly a hundred yards along the beach did Mistress Jizelle see anything out of the ordinary. When she did, she stopped and looked at it carefully. Ahead and to her left, some eight or

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nine yards from the base of the cliff, a man lay sprawled in the dry sand, twenty feet or so above the high-tide line.

After a moment, she walked toward the man, carefully and cautiously. He was certainly not dressed for bathing; he was wearing the evening dress of a gentleman. She walked up to the edge of the damp sand and stopped again, looking at the man carefully.

Then she saw something that made the hairs on the back of her neck rise.

Danglars was sitting placidly in the driver's seat of the brougham, smoking his clay pipe, when he saw the approaching trio. He eyed them carefully as they came toward the carriage. Two young men and an older one, all dressed in the work clothes typical of a Norman farmer. The eldest waved a hand and said something Danglars couldn't hear over the sound of the waves and the wind. Then they came close enough to be audible, and the eldest said: "Allo! Got dee any trouble here?"

Danglars shook his head. "Nup."

The farmer ignored that. "Me an' m'boys saw dee stop up here, an' thought mayap we could help. Name's Champtier. Samel Champtier. Dese two a my tads, Evrit an' Lorin. If dou hass need a aid, we do what we can."

Danglars nodded slowly, then took his pipe from his mouth. "Good o' ya, Goodman Samel. Grace to ya. But I got no problem. Mistress wanted to walk along the beach. Likes that sort of thing. We head on pretty soon."

Samel cleared his throat. "Hass dou broke dy fast, dou an' d' misslady? Wife fixin' breakfast now. Mayap we bring du somewhat?"

Danglars took another puff and sighed. Norman farmers were good, kindly folk, but sometimes they overdid it. "Broke fast, Goodman Samel. Grace to ya. Mistress comes back, we got to be gettin' on. Again, grace to ya."

"Caffe, then," Samel said decisively. He turned to the elder son. "Evrit! Go tell dy mama for a pot a caffe an' two mugs! Run it, now!"

Evrit took off like a turpentined ostrich.

Danglars cast his eyes toward heaven.

Mistress Jizelle swallowed and again looked closely at the dead man. There was a pistol in his right hand and an ugly hole in his right temple. There was blood all over the sand around his head. And there was no question about his being dead.

She looked up and down the beach while she rather dazedly brushed at her skirt with the palms of her hands. Then, bracing her shoulders, Mistress Jizelle turned herself about and walked back the way she had come, paralleling her own footprints. There were no others on the beach.

Three men were talking to Danglars, and Danglars did not seem to

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be agitated about it. Determinedly, she strode onward.

Not until she was within fifteen feet of the brougham did Danglars deign to notice her. Then he tugged his forelock and smiled his sleepy smile. "Greeting, mistress. Have a nice walk?" He had a mug of caffe in one hand. He gestured with the other. "Goodman Samel and his boys, mistress, from the near farm. Brought a pot o' caffe."

The three farmers were tugging at their forelocks, too.

"I appreciate that," she said. "Very much. But I fear we have an emergency to attend to. Come with me, all of you."

Danglars widened his eyes. "Emergency, mistress?"

"That's what I said, wasn't it? Now, all of you follow me, and I shall show you what I mean."

"But, mistress—" Danglars began.

"Follow me," she said imperatively.

Danglars got down from the brougham. He had no choice but to follow with the others.

Mistress Jizelle led them across the sparse grass to the edge of the cliff that overlooked the place where the dead man lay.

"Now look down there. There is a dead man down there. He has, I think, been shot to death. I am not much acquainted with such things, but that is what it looks like to me."

The four knelt and looked at the body below. There was silence for a moment, then Samel said, rather formally: "Dou be right, mistress. Dead he be."

"Who is he, goodman?" she asked.

Samel stood up slowly and brushed his trousers with calloused hands. "Don't rightly know, mistress." He looked at his two sons, who were still staring down with fascination. "Who be he, tads?"

They stood up, brushing their trousers as their father had. Evrit, the elder, spoke. "Don't know, papa. Ee not from hereabout." He nudged his younger brother with an elbow. "Lorin?"

Lorin shook his head, looking at his father.

"Well, that does not matter for the moment," Mistress Jizelle said firmly. "There is Imperial Law to follow in such cases as this, and we must do so. Danglars, get in the brougham and return to—"

"But, Mistress Jizelle," Danglars cut in, "I can't—"

"You must do exactly as I tell you, Danglars," she said forcefully. "It is most important. Go back to St.-Matthew's-Church and notify the Rector. Then go on to Caen and notify the Armsmen. Goodman Samel and his boys will wait here with me and make sure nobody disturbs anything. Do you understand?"

"Yus, mistress. Perfec'ly." And off he went.

She turned to Samel. "Goodman, can you spare some time? I am sure you have work to do, but I shouldn't

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like to be left here alone."

Samel smiled. "Mornin' chores all done, mistress. Eldest tad, Orval, can take care of all for a couple hours. Don't fret." He looked at the younger boy. "Lorin, go dou an tell dy mama an' dy brother what happen, but nobody else. An' say dey tell nobody. Hear?"

Lorin nodded and ran.

"And bring dou back somewat ta eat!" Evrit yelled after him.

Samel looked worried. "Mistress?"

"Yes, Goodman Samel?"

"Hass dou noticed somewat funny about d' man dere?"

"Funny?" She raised an eyebrow.

"Yea, mistress." He pointed down. "All round him, sand. Smooth. No footprints but dine own, an' dey come nowhere near him. Fresh dead, but—how he get dere?"

Five days later, Sir James le Lien, Special Agent of His Majesty's Secret Service, was seated in a comfortable chair in the studylike office of Lord Darcy, Chief Investigator for His Royal Highness, Richard, Duke of Normandy.

"And I still don't know where the Ipswich Phial is, Darcy," he was saying with some exasperation. "And neither do they."

Outside the open window, sounds of street traffic—the susurration of rubber-tired wheels on pavement, the clopping of horses' hooves, the footsteps and voices of a thousand people, and the myriad of other small noises that make up the song of a city—were wafted up from six floors below.

Lord Darcy leaned back in the chair behind his broad desk and held up a hand.

"Hold it, Sir James. You're leaping far ahead of yourself. I presume that by 'they' you mean the *Serka*—the Polish Secret Service. But what is this Phial, anyway?"

"I can't tell you for two reasons. First, you have no need to know. Second, neither do I, so I couldn't tell you if I wanted. Physically, it's a golden cylinder the size of your thumb, stoppered at one end with a golden stopper, which is sealed over with soft gold. Other than that, I know nothing but the code name: The Ipswich Phial."

Sean O Lochlainn, Master Sorcerer, who had been sitting quietly in another chair with his hands folded over his stomach, his eyes half closed, and his ears wide open, said: "I'd give a pretty to know who assigned that code name; sure and I'd have him sacked for incompetence."

"Oh?" said Sir James. "Why?"

Master Sean opened his eyes fully. "If the Poles don't know that the Ipswich Laboratories in Suffolk, under Master Sir Greer Davidson, is devoted to secret research in magic, then they are so incredibly stupid that we need not worry about them at all. With a name like 'Ipswich Phial' on it, the *Serka* would *have* to investigate, if they heard about it."

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"Maybe it's just a red herring designed to attract their attention while something else is going on," said Lord Darcy.

"Maybe," Master Sean admitted, "but if so, me lord, it's rather dear. What Sir James has just described is an auric-stabilized psychic shield. What would you put in such a container? Some Khemic concoction, like an explosive or a poison? Or a secret message? That'd be incompetence compounded, like writing your grocery list on vellum in gold. Conspicuous consumption."

"I see," said Lord Darcy. He looked at Sir James. "What makes you think the *Serka* hasn't got it already?"

"If they had it," Sir James said, "they'd have cut and run. And they haven't; they're still swarming all over the place. There must be a dozen agents there."

"I presume that your own men are all over the place, too?"

"We're trying to keep them covered," Sir James said.

"Then they know you don't have the Phial, either."

"Probably."

Lord Darcy sighed and began filling his silver-chased porcelain pipe. "You say the dead man is Noel Standish." He tapped a sheaf of papers with his pipestem. "These say he was identified as a man named Bourke. You say it was murder. These say that the court of His Majesty's Coroner was ready to call it suicide until you put pressure on to keep the decision open. I have the vague feeling, James, that I am being used. I should like to point out that I am Chief Criminal Investigator for the Duke of Normandy, not—repeat: *not*—an agent of His Majesty's Secret Service."

"A crime has been committed," Sir James pointed out. "It is your duty to investigate it."

Lord Darcy calmly puffed his pipe alight. "James, James." His lean, handsome face was utterly impassive as he blew out a long plume of smoke. "You know perfectly well I am not obliged to investigate every homicide in the Duchy. Neither Standish nor Bourke was a member of the aristocracy. I don't *have* to investigate this mess unless and until I get a direct order from either His Highness the Duke or His Majesty the King. Come on, James—convince me."

Master Sean did not smile, although it was somewhat of a strain to keep his face straight. The stout little Irish sorcerer knew perfectly well that his lordship was bluffing. Lord Darcy could no more resist a case like this than a bee can resist clover blossoms. But Sir James did not know that. He did know that by bringing the case before his superiors, he could eventually get an order from the King, but by then the whole thing would likely be over.

"What do you want, Darcy?" the King's agent asked.

"Information," his lordship said flatly. "You want me to go down to

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St.-Matthew's-Church and create a diversion while you and your men do your work. Fine. But I will not play the part of a dupe. I damn well want to know what's going on. I want the whole story."

Sir James thought it over for ten or fifteen seconds, then said: "All right, my lord. I'll give it to you straight."

For centuries, the Kings of Poland had been expanding, in an ebb-and-flow fashion, the borders of their territories, primarily toward the east and south. In the south, they had been stopped by the Osmanlis. In the east, the last bite had been taken in the early 1930s, when the Ukraine was swallowed. King Casimir IX came to the throne in 1937 at the age of twenty, and two years later had plunged his country into a highly unsuccessful war with the Empire and her Scandinavian allies, and any further thought of expansion to the east was stopped by the threat of the unification of the Russian States.

Poland was now, quite literally, surrounded by enemies who hated her and neighbors who feared her. Casimir should have taken a few years to consolidate and conciliate, but it was apparent that the memory of his father and his own self-image as a conqueror were too strong for him. Knowing that any attempt to march his armies into the German buffer states that lay between his own western border and the eastern border of the Empire would be suicidal as things stood, Casimir decided to use his strongest non-military weapon: the *Serka*.

The nickname comes from a phrase meaning roughly: "The king's Right Arm." For financial purposes, it is listed in the books as the Ministry of Security Control, making it sound as if it were a division of the King's Government. It is not; none of His Slavonic Majesty's ministers or advisors know anything about, or have any control over, its operation. It is composed of fanatically loyal men and women who have taken a solemn vow of obedience to the King himself, *not* to the Government. The *Serka* is responsible to no one but the King's Person.

It is composed of two main

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branches: The Secret Police (domestic), and the Secret Service (foreign). This separation, however, is far from rigid. An agent of one branch may at any time be assigned to the other.

The *Serka* is probably the most powerful, most ruthless instrument of government on the face of the Earth today. Its agents, many of them Talented sorcerers, infest every country in Europe, most especially the Anglo-French Empire.

Now, it is a historical fact that Plantagenet Kings do not take kindly to invasion of their domain by foreign sovereigns; for eight centuries they have successfully resisted such intrusive impudence.

There is a saying in Europe: "He who borrows from a Plantagenet may repay without interest; he who steals from a Plantagenet will repay at ruinous rates."

His present Majesty, John IV—by the Grace of God, King of England, Ireland, Scotland, and France; Emperor of the Romans and Germans; Premier Chief of the Moqtessumid Clan; Son of the Sun; Count of Anjou and Maine; Prince Donator of the Sovereign Order of St. John of Jerusalem; Sovereign of the Most Ancient Order of the Round Table, of the Order of the Leopard, of the Order of the Lily, of the Order of the Three Crowns, and of the Order of St. Andrew; Lord and Protector of the Western Continents of New England and New France; Defender of the Faith—was no exception to that rule.

Unlike his medieval predecessors, however, King John had no desire to increase Imperial holdings in Europe. The last Plantagenet to add to the Imperial domain in Europe was Harold I, who signed the original Treaty of Køb̊nhavn in 1420. The Empire was essentially frozen within its boundaries for more than a century until, during the reign of John III, the discovery of the continents of the Western Hemisphere opened a whole new world for Anglo-French explorers.

John IV no longer thought of European expansion, but he deeply resented the invasion of his realm by Polish *Serka* agents. Therefore, the theft of a small golden phial from the Ipswich Laboratories had provoked instant reaction from the King and from His Majesty's Secret Service.

"The man who actually stole it," Sir James explained, "is irrelevant. He was merely a shrewd biscuit who accidentally had a chance to get his hands on the Phial. Just how is immaterial, but rest assured that that hole has been plugged. The man saw an opportunity and grabbed it. He wasn't a Polish agent, but he knew how to get hold of one, and a deal was made."

"How much time did it take him to deal, after the Phial was stolen?" Lord Darcy asked.

"Three days, my lord. Sir Greer found it was missing within two hours of its being stolen, and notified us straight away. It was patently

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obvious who had taken it, but it took us three days to trace him down. As I said, he was a shrewd biscuit.

"By the time we'd found him, he'd made his deal and had the money. We were less than half an hour too late. A *Serka* agent already had the Phial and was gone.

"Fortunately, the thief was just that—a thief, not a real *Serka* agent. When he'd been caught, he freely told us everything he knew. That, plus other information received, convinced us our quarry was on a train for Portsmouth. We got hold of Noel Standish at the Portsmouth office by teleson, but . . ."

The plans of men do not necessarily coincide with those of the Universe. A three-minute delay in a traffic jam had ended with Noel Standish at the slip, watching the Cherbourg boat sliding out toward the Channel, with forty feet between himself and the vessel.

Two hours later, he was standing at the bow of H.I.M.S *Dart*, staring southward into the darkness, listening to the rushing of the Channel waters against the hull of the fast cutter. Standish was not in a good mood.

In the first place, the teleson message had caught him just as he was about to go out to dine with friends at the Bellefontaine, and he had had no chance to change; he felt silly as hell standing on the deck of a Navy cutter in full evening dress. Further, it had taken better than an hour to convince the Commanding Admiral at the Portsmouth Naval Docks that the use of a cutter was imperative—and then only at the cost of a teleson connection to London.

There was but one gem in these otherwise bleak surroundings: Standish had a firm psychic lock on his quarry.

He had already had a verbal description from London. *Young man, early to middle twenties. Five feet nine. Slender, but well-muscled. Thick, dark brown hair. Smooth shaven. Brown eyes. Well formed brows. Face handsome, almost pretty. Well-dressed. Conservative dark green coat, puce waistcoat, gold-brown trousers. Carrying a dark olive attaché case.*

And he had clearly seen the quarry standing on the deck of the cross-Channel boat as it had pulled out of Portsmouth, heading for Cherbourg.

Standish had a touch of the Talent. His own name for a rather specialized ability was "the Game of Hide and Seek," wherein Standish did both the hiding and the seeking. Once he got a lock on someone he could follow him anywhere. Further, Standish became psychically invisible to his quarry; even a Master Sorcerer would never notice him as long as Standish took care not to be located visually. Detection range, however, was only a matter of miles, and the man in the puce waistcoat, Standish knew, was at the limit of that range.

Someone tapped Standish on the

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shoulder. "Excuse me, sir—"

Standish jerked round nervously. "*What? What?*"

The young officer lifted his eyebrows, taken aback by the sudden reaction. This Standish fellow seemed to have every nerve on edge. "Begging your pardon, sir, but the Captain would have a word with you. Follow me, please."

Senior Lieutenant Malloix, commanding H.I.M.S. *Dart*, wearing his royal blue uniform, was waiting in his cabin with a glass of brandy in each hand. He gave one to Standish while the junior officer quietly disappeared. "Come in, Standish. Sit and relax. You've been staring off the starboard bow ever since we cast off, and that's no good. Won't get us there any the faster, you know."

Standish took the glass and forced a smile. "I know, Captain. Thanks." He sipped. "Still, do you think we'll make it?"

The captain frowned, sat down, and waved Standish to a chair while he said: "Hard to say, frankly. We're using all the power we have, but the sea and the wind don't always do what we'd like 'em to. There's not a damn thing we can do about it, so breathe deep and see what comes, eh?"

"Right you are, Captain." He took another swallow of brandy. "How good a bearing do we have on her?"

S/Lt Malloix patted the air with a hand. "Not to worry. Lieutenant Seamus Mac Lean, our navigator, has a Journeyman's rating in the Sorcerer's Guild, and this sort of thing is his speciality. The packet boat is two degrees off to starboard and, at our present speed, forty-one minutes ahead of us. That's the good news."

"And the bad news?"

Malloix shrugged. "Wind variation. We haven't gained on her in fifteen minutes. Cheer up. Pour yourself another brandy."

Standish cheered up and drank more brandy, but it availed him nothing. The *Dart* pulled into the dock at Cherbourg one minute late, in spite of all she could do.

Nevertheless, Goodman Puce-Weskit was less than a hundred yards away as Standish ran down the gangplank of the *Dart*, and the distance rapidly closed as he walked briskly toward his quarry, following his psychic compass that pointed unerringly toward Puce-Weskit.

He was hoping that Puce-Weskit was still carrying the Phial; if he wasn't, if he had passed it on to some unknown person aboard the packet, the whole thing was blown. The thing would be in Krakowa before the month was out.

He tried not to think about that.

The only thing to do was follow his quarry until there came a chance to waylay and search him.

He had already given a letter to the captain of the *Dart*, to be delivered as soon as possible to a certain address on the Rue Queen Brigid, explaining to the agent in

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charge of the Cherbourg office what was going on. The trouble was, Standish was not carrying a tracer attuned to the Cherbourg office; there was no way to get in touch with them, and he didn't dare leave Puce-Weskit. He couldn't even set up a rendezvous, since he had no idea where Puce-Weskit would lead him.

And, naturally, when one needed an Armsman, there wasn't one in sight.

Twenty minutes later, Puce-Weskit turned on to the Rue Queen Brigid.

Don't tell me he's headed for the Service office, Standish thought. *My dear Puce-Weskit, surely you jest.*

No fear. A dozen squares from the Secret Service office, Goodman Puce-Weskit turned and went into a caffe-house called the Aden. There, he stopped.

Standish had been following on the opposite side of the street, so there was less chance of his being spotted. Dodging the early morning traffic, narrowly avoiding the lead horse of a beer lorry, he crossed the Rue Queen Brigid to the Aden.

Puce-Weskit was some forty feet away, toward the rear of the caffe-house. Could he be passing the Phial on to some confederate?

Standish was considering what to do next when the decision was made for him. He straightened up with a snap as his quarry suddenly began to move southward at a relatively high rate of speed.

He ran into the Aden. And saw his mistake.

The rear wall was only thirty feet away. Puce-Weskit had gone through the rear door, and had been standing *behind* the Aden!

He went right on through the large room, out the back door. There was a small alleyway there, but the man standing a few feet away was most certainly not his quarry.

"Quick!" Standish said breathlessly. "The man in the puce waistcoat! Where did he go?"

The man looked a little flustered. "Why—uh—I don't know, sir. As soon as his horse was brought—"

"Horse? Where did he get a horse?"

"Why, he left it in the proprietor's charge three or four days ago. Four days ago. Paid in advance for the keeping of it. He asked it to be fetched, then he went. I don't know where."

"Where can I rent a horse?" Standish snapped.

"The proprietor—"

"Take me to him immediately!"

"And that," said Sir James le Lien, "is the last trace we were able to uncover until he reported in at Caen two days later. We wouldn't even know that much if one of our men hadn't been having breakfast at the Aden. He recognized Standish, of course, but didn't say anything to him, for obvious reasons."

Lord Darcy nodded. "And he turns up dead the following morning near St.-Matthew's-Church. Any conjecture on what he may have

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been doing during those two days?"

"It seems fairly clear. The proprietor of the Aden told us that our quarry—call him Bourke—had his saddlebags packed with food packets in protective-spell wrappers, enough for a three, maybe four-day trip. You know the Old Shore Road that runs southeast from Cherbourg to the Vire, crosses the river, then goes westward, over the Orne, and loops around to Harfleur?"

"Of course," Lord Darcy said.

"Well, then, you know it's mostly farming country, with only a few scattered villages, and no teleson connections. We think Bourke took that road, and that Standish followed him. We think Bourke was headed for Caen."

Master Sean lifted an eyebrow. "Then why not take the train? 'Twould be a great deal easier and faster, Sir James."

Sir James smiled. "It would be. But not safer. The trouble with public transportation is that you're essentially trapped on it. When you're fleeing, you want as much freedom of choice as possible. Once you're aboard a public conveyance, you're pretty much constrained to stay on it until it stops, and that isn't under your control."

"Aye, that's clear," said Master Sean. He looked thoughtful. "This psychic lock-on you mentioned—you're sure Standish used it on Bourke?"

"Not absolutely certain, of course," Sir James admitted. "But he certainly had that Talent; he was tested by a board of Masters from your own Guild. Whether he used it or not at that particular time, I can only conjecture, but I think it's a pretty solid assumption."

Lord Darcy carefully watched a column of pipesmoke rise toward the ceiling and said nothing.

"I'll agree with you," Master Sean said. "There's no doubt in me mind he did just that, and I'll not say he was wrong to do so. *De mortuis non disputandum est.* I just wonder if he knew how to handle it."

"How do you mean?" Sir James asked.

"Well, let's suppose a man could make himself perfectly transparent—'invisible', in other words. The poor lad would have to be very careful, eh? In soft ground or in snow, he'll leave footprints; in a crowd, he may brush up against someone. Can you imagine what it would be like if you grabbed such a man? There you've got an armful of air that feels fleshy, smells sweaty, sounds excited, and would taste salty if you cared to try the experiment. You'll admit that such an object would be suspect?"

"Well, yes," Sir James admitted, "but—"

"Sir James," Master Sean continued, "you have no idea how conspicuous a psychically invisible person can be in the wrong circumstances. There he stands, visible to the eye, sensible to the touch, audible to the ear, and all the rest—*but there's nobody home!*

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"The point I'm making, Sir James, is this: How competent was Noel Standish at handling his ability?"

Sir James opened his mouth, shut it, and frowned. After a second, he said: "When you put it that way, Master Sean, I must admit I don't know. But he handled it successfully for twelve years."

"And failed once," said Master Sean. "Fatally."

"Now hold, my dear Sean," Lord Darcy said suddenly. "We have no evidence that he failed in that way. That he allowed himself to be killed is a matter of cold fact; that he did so in that way is pure conjecture. Let's not leap to totally unwarranted conclusions."

"Aye, me lord. Sorry."

Lord Darcy focused his gray eyes on Sir James. "Then I have not been called in merely to create a diversion, eh?"

Sir James blinked. "I beg your pardon, my lord?"

"I mean," said his lordship patiently, "that you actually want me to solve the problem of 'who killed Noel Standish?' "

"Of course! Didn't I make that clear?"

"Not very." Lord Darcy picked up the papers again. "Now let's get a few things straight. How did the body come to be identified as Bourke, and where is the real Bourke? Or whoever he was."

"The man Standish was following checked into the Green Seagull Inn under that name," Sir James said. "He'd used the same name in England. He was a great deal like Standish in height, weight, and coloring. He disappeared that night, and we've found no trace of him since."

Lord Darcy nodded thoughtfully. "It figures. Young gentleman arrives at village inn. Body of young gentleman found next morning. Since there is only one young gentleman in plain sight, they are the same young gentleman. Identifying a total stranger is a chancy thing at best."

"Exactly. That's why I held up my own identification."

"I understand. Now, exactly how did you happen to be in St.-Matthew's-Church that night?" Lord Darcy asked.

"Well, as soon as Standish was fairly certain that his quarry had settled down at the Green Seagull, he rode for Caen and sent a message to my office, here in Rouen. I took the first train, but by the time I got there, they were both missing."

"Yes." Lord Darcy sighed. "Well, I suppose we'd best be getting down there. I'll have to ask His Royal Highness to order me to, so you may as well come along with me and explain the whole thing all over again to Duke Richard."

Sir James looked pained. "I suppose so. We want to get there as soon as possible, or the whole situation will become impossible. Their silly Midsummer Fair starts the day after tomorrow, and there are strangers showing up already."

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Lord Darcy closed his eyes. "That's all we need. Complications."

Master Sean went to the door of the office. "I'll have Ciardi pack our bags, me lord. Looks like a long stay."

The little village of St.-Matthew's-Church was transforming itself. The Fair proper was to be held in a huge field outside of town, and the tents were already collecting on the meadow. There was, of course, no room in the village itself for people to stay; certainly the little Green Seagull couldn't hold a hundredth of them. But a respectable tent-city had been erected in another big field, and there was plenty of parking space for horse-wagons and the like.

In the village, the storefronts were draped with bright bunting, and the shopkeepers were busy marking up all the prices. Both pubs had been stocking up on extra potables for weeks. For nine days, the village would be full of strangers going about their hectic business, disrupting the peace of the local inhabitants, bringing with them a strange sort of excitement. Then they would go, leaving behind acres of ugly rubbish and bushels of beautiful cash.

In the meanwhile, a glorious time would be had by all.

Lord Darcy cantered his horse along the River Road up from Caen and entered St.-Matthew's-Church at noon on that bright sunshiny day, dressed in the sort of riding clothes a well-to-do merchant might wear. He wasn't exactly incognito, but he didn't want to attract attention, either. Casually, he made his way through the already gathering throngs toward the huge old church dedicated to St. Matthew, which had given the village its name. He guided his mount over to the local muffin square, where the array of hitching posts stood, tethered his horse, and walked over to the church.

The Reverend Father Arthur Lyon, Rector of the Church of St.-Matthew, and, *ipso facto*, Rector of St.-Matthew's-Church, was a broad-shouldered man in his fifties who stood a good two inches taller than six feet. His bald head was fringed with silvery hair, and his authoritative, pleasant face was usually smiling. He was sitting behind his desk in his office.

There came a rap at his office door. A middle-aged woman came in quickly and said: "Sorry to bodder dee, Fahder, but dere's a Lord Darcy to see dee."

"Show him in, Goodwife Anna."

Lord Darcy entered Father Art's office to find the priest waiting with outstretched hand. "It's been some time, my lord," he said with a broad smile. "Good to see you again."

"I may say the same. How have you been, old friend?"

"Not bad. Pray, sit down. May I offer you a drink?"

"Not just now, Father." He took the proffered seat. "I understand you

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have a bit of a problem here."

Father Art leaned back in his chair and folded his hands behind his head. "Ahh, yes. The so-called suicide. Bourke." He chuckled. "I thought higher authority would be in on that, sooner or later."

"Why do you say 'so-called suicide', Father?"

"Because I know people, my lord. If a man's going to shoot himself, he doesn't go out to a lonely beach for it. If he goes to a beach, it's to drown himself. A walk into the sea. I don't say a man has never shot himself by the seaside, but it's so rare that when it happens I get suspicious."

"I agree." Lord Darcy said. He had known Arthur Lyon for some years, and knew that the man was an absolutely dedicated servant of his God and his King. His career had been unusual. During the '39 war, he had risen to the rank of Sergeant-Major in the Eighteenth Infantry. Afterwards, he had become an Officer of the King's Peace, and had retired as a Chief Master-at-Arms before taking up his vocation as a priest. He had shown himself to be not only a top-grade priest, but also a man with the Talent as a brilliant Healer, and had been admitted, with honors, to the Order of St. Luke.

"Old friend," Lord Darcy said, "I need your help. What I am about to tell you is most confidential; I will have to ask you to disclose none of it without official permission."

Father Art took his hands from behind his head and leaned forward with a gleam in his eyes. "As if it were under the Seal of the Confessional, my lord. Go ahead."

It took better than half an hour for Lord Darcy to give the good father the whole story as he knew it. Father Art had leaned back in his chair again with his hands locked behind his head, smiling seraphically at the ceiling. "Ah, yes, my lord. Utterly fascinating. I remember Friday, sixth June, very well. Yes, very well indeed." He continued to smile at the ceiling.

Lord Darcy closed his right eye and cocked his left eyebrow. "I trust you intend to tell me what incident stamped that day so indelibly on your mind."

"Certainly, my lord. I was just reveling in having made a deduction. When I tell my story, I dare say you'll make the same deduction." He brought his gaze down from the ceiling and his hands from behind his head. "You might say it began late Thursday night. Because of a sick call which had kept me up most of the previous night, I went to bed quite early Thursday evening. And, naturally, I woke up a little before midnight and couldn't get back to sleep. I decided I might as well make use of the time, so I did some paper work for a while and then went into the church to say the morning office before the altar. Then I decided to take a walk in the churchyard. I often do that; it's a pleasant place to meditate.

"There was no moon that night,"

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the priest continued, "but the sky was cloudless and clear. It was about two hours before dawn. It was quite dark, naturally, but I know my way about those tombstones pretty well by now. I'd been out there perhaps a quarter of an hour when the stars went out."

Lord Darcy seemed to freeze for a full second. "When the *what?*"

"When the stars went out," Father Art repeated. "One moment, there they were, in their accustomed constellations—I was looking at Cygnus in particular—and the next moment the sky was black all over. Everywhere. All at once."

"I see," said Lord Darcy.

"Well, *I* couldn't," the priest said, flashing a smile. "It was black as the Pit. For a second or two, I confess, I was almost panicky. It's a weird feeling when the stars go out."

"I dare say," Lord Darcy murmured.

"But," the Father continued, "as a Sensitive, I knew that there was no threat close by, and, after a minute, I got my bearings again. I could have come back to the church, but I decided to wait for a while, just to find out what would happen next. I don't know how long I stood there. It seemed like an hour, but it was probably less than fifteen minutes. Then the stars came back on the same way they'd gone out—all at once, all over the sky."

"No dimming out?" Lord Darcy asked. "No slow brightening back on?"

"None, my lord. *Blink:* off. *Blink:* on."

"Not a sea fog, then,"

"Impossible. No sea fog could move that fast."

Lord Darcy focused his eyes on a foot-high statue of St. Matthew that stood in a niche in the wall and stared at the Apostle without actually seeing him.

After a minute, Lord Darcy said: "I left Master Sean in Caen to make a final check of the body. He should be here within the hour. I'll talk to him, but . . ." His voice trailed off.

Father Art nodded. "Our speculation certainly needs to be confirmed, my lord, but I think we're on the right track. Now, how else can I help?"

"Oh, yes. That." Lord Darcy grinned. "Your revelation of the extinguished stars almost made me forget why I came to talk to you in the first place. What I'd like you to do, Father, is talk to the people that were at the Green Seagull on the afternoon and late evening of the fifth. I'm a stranger, and I probably wouldn't get much out of them—certainly not as much as you can. I want to know the whole pattern of comings and goings. I don't have to tell an old Armsman like yourself what to look for. Will you do it?"

Father Art's smile came back. "With pleasure, my lord."

"There's one other thing. Can you put up Master Sean and myself for a few days? There is, alas, no room at the inn."

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Father Art's peal of laughter seemed to rock the bell tower.

Master Sean O Lochlainn had always been partial to mules. "The mule," he was fond of saying, "is as much smarter than a horse as a raven is smarter than a falcon. Neither a raven nor a mule will go charging into combat just because some human tells him to." Thus it was that the sorcerer came riding toward St.-Matthew's-Church, clad in plain brown, seated in a rather worn saddle, on the back of a very fine mule. He looked quite pleased with himself.

The River Road had plenty of traffic on it; half the population of the duchy seemed to be converging on the little coastal village of St.-Matthew's-Church. So Master Sean was mildly surprised to see someone headed toward him, but that feeling vanished when he saw that the approaching horseman was Lord Darcy.

"Not headed back to Caen, are you, me lord?" he asked when Lord Darcy came within speaking distance.

"Not at all, my dear Sean; I rode out to meet you. Let's take the cutoff road to the west; it's a shortcut that bypasses the village and takes us to the Old Shore Road, near where the body was found." He wheeled his horse around and rode beside Master Sean's mule. Together, they cantered briskly toward the Old Shore Road.

"Now," Lord Darcy said, "what did you find out at Caen?"

"Conflicting evidence, me lord; conflicting evidence. At least as far as the suicide theory is concerned. There was evidence at the cliff edge that he had fallen or been pushed over and tumbled down along the face of the cliff. But he was found twenty-five feet from the base of the cliff. He had two broken ribs and a badly sprained right wrist—to say nothing of several bad bruises. All of these had been inflicted some hours before death."

Lord Darcy gave a rather bitter chuckle. "Which leaves us with two possibilities. *Primus:* Goodman Standish stands on the edge of the cliff, shoots himself through the head, tumbles to the sand below, crawls twenty-five feet, and takes some hours to die of a wound that was obviously instantly fatal. Or, *secundus:* He falls off the cliff, crawls the twenty-five feet, does nothing for a few hours, then decides to shoot himself. I find the second hypothesis only slightly more likely than the first. That his right wrist was sprained badly is a fact that tops it all off. Not suicide; no, not suicide." Lord Darcy grinned. "That leaves accident or murder. Which hypothesis do you prefer, my dear Sean."

Master Sean frowned deeply, as if he were in the awful throes of concentration. Then his face brightened as if revelation had come. "I have it, me lord! He was accidentally murdered!"

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Lord Darcy laughed. "Excellent! Now, having cleared that up, there is further evidence that I have not given you yet."

He told Master Sean about Father Art's singular experience with the vanishing stars.

When he had finished, the two rode in silence for a minute or two. Then Master Sean said softly: "So *that's* what it is."

There was an Armsman standing off the road at the site of the death, and another seated, who stood up as Lord Darcy and Master Sean approached. The two riders dismounted and walked their mounts up to where the Armsmen were standing.

"I am sorry, gentlemen," said the first Armsman with an air of authority, "but this area is off bounds, by order of His Royal Highness the Duke of Normandy."

"Very good; I am happy to hear it," said his lordship, taking out his identification. "I am Lord Darcy; this is Master Sorcerer Sean O Lochlainn."

"Yes, my lord," said the Armsman. "Sorry I didn't recognize you."

"No problem. This is where the body was found?"

"Yes, my lord. Just below this cliff, here. Would you like to take a look, my lord?"

"Indeed I would. Thank you."

Lord Darcy, under the respectful eyes of the two Armsmen, minutely examined the area around the cliff edge. Master Sean stayed with him, trying to see everything his lordship saw.

"Everything's a week old," Lord Darcy muttered bitterly. "Look at that grass, there. A week ago, I could have told you how many men were scuffing it up; today, I only know that it was more than two. I don't suppose there's any way of reconstructing it, my dear Sean?"

"No, me lord. I am a magician, not a miracle worker."

"Thought not. Look at the edge of this cliff. He fell, certainly. But was he pushed? Or thrown? No way of telling. Wind and weather have done their work too well. To quote my cousin de London: *'Pfui!'* "

"Yes, me lord."

"Well, let's go down to the beach and take a look from below."

That operation entailed walking fifty yards or so down the cliff edge to a steep draw which they could clamber down, then back again to where Standish had died.

There was a pleasant breeze from landward that brought the smell of growing crops. A dozen yards away, three gulls squabbled raucously over the remains of some dead sea-thing.

Lord Darcy was still in a bitter mood. "Nothing, damn it. *Nothing.* Footprints all washed away long ago. Or blown away by the wind. Damn, damn, *damn*! All we have to go by is the testimony of eyewitnesses, which is notoriously unreliable."

"You don't believe 'em, me lord?" Master Sean asked.

Lord Darcy was silent for several

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seconds. Then, in a calmer voice, he said: "Yes. Oddly enough, I do. I think the testimony of those farmers was absolutely accurate. They saw what they saw, and they reported what they saw. But they did not—they *could* not have seen everything!"

One of the Armsmen on the cliff above said: "That's the spot, right there, my lord. Near that flat rock." He pointed.

But Lord Darcy did not even look at the indicated spot. He had looked up when the Armsman spoke, and was staring at something on the cliff face about two feet below the Armsman's boot toes.

Master Sean followed his lordship's gaze and spotted the area immediately. "Looks like someone's been carving his initials, me lord."

"Indeed. How do you make them out?"

"Looks like S. . .S. . .O. Who do we know with the initials SSO?"

"Nobody connected with this case so far. The letters may have been up there for some time. But . . ."

"Aye, me lord," said Master Sean. "I see what you mean. I'll do a time check on them. Do you want 'em preserved?"

"Unless they're more than a week old, yes. By the by, did Standish have a knife on him when he was found?"

"Not so far as I know, me lord. Wasn't mentioned in the reports."

"Hmmm." Lord Darcy began prowling around the whole area, reminding Master Sean of nothing so much as a leopard in search of his evening meal. He finally ended up at the base of the cliff, just below where the glyphs had been carved into the clay wall. He went down on his knees and began digging.

"It has to be here somewhere," he murmured.

"Might I ask what you're looking for, me lord?"

"A piece of steel, my dear Sean: a piece of steel."

Master Sean put his carpetbag on the sand and opened it, taking out a thin, dark, metallic-blue wand just as Lord Darcy said: "Aa*ha*!"

Master Sean, wand still in hand, said: "What is it, me lord?"

"As you see," Lord Darcy said, standing up and displaying the object in the palm of his hand. "Behold and observe, old friend: a man's pocketknife."

Master Sean smiled broadly. "Aye. I presume you'll be wanting a relationship test, me lord? Carving, cutter, and corpse?"

"Of course. No, don't put away your wand. That's your generalized metal detector, is it not?"

"Aye, me lord. It's been similarized to all things metallic."

"Good. Put this knife away for analysis, then let's go over to where the body was found. We'll see if there isn't something else to be dug up."

The Master Sorcerer pointed the wand in his right hand at the sand and moved back and forth across the

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area, his eyes almost closed, his left hand held above his head, fingers spread. Every time he stopped, Lord Darcy would dig into the soft sand and come up with a bit of metal—a rusty nail, a corroded brass belt-buckle, a copper twelfth-bit, a bronze farthing, and even a silver half-sovereign—all of which showed evidence of having been there for some time.

While the two of them worked, the Armsmen on the cliff above watched in silence. It is not wise to disturb a magician at work.

Only one of the objects was of interest to Lord Darcy: a small lump of lead. He dropped it into a waistcoat pocket and went on digging.

At last, Master Sean, having covered an area of some eight by twelve feet, said: "That's it, me lord."

Lord Darcy stood up, brushed the sand from his hands and trousers, and looked at the collection of junk he had put on the big flat rock. "Too bad we couldn't have found a sixth-bit. We'd be an even solidus ahead. No gold in the lot, either."

Master Sean chuckled. "You can't expect to find a complete set of samples from the Imperial Mint, me lord."

"I suppose not. But here—" he took the small lump of lead from his waistcoat pocket, "—is what I expected to find. Unless I am very much mistaken, this bullet came from the .36 Heron that the late Standish carried, and is the same bullet which passed through his head. Here; check on it, will you, my good Sean?"

Master Sean put the bullet in one of the carefully insulated pockets of his capacious carpetbag, and the two men trudged back across the sand, up the slope to the top of the cliff again.

Master Sean spread himself prone and looked over the edge of the cliff. After a minute inspection of the carving in the sandy clay of the cliff face, he got up, took some equipment from his carpetbag, and lay down again to go to work. A simple cohesion spell sufficed to set the clay so that it would not crumble. Then, he deftly began to cut out the brick of hardened clay defined by the spell.

In the meantime, Lord Darcy had called the senior of the two Armsmen to one side and had asked him a question.

"No, my lord, we ain't had any trouble," the Armsman said. "We been runnin' three eight-hour shifts out here ever since the body was found, and hardly nobody's come by. The local folk all know better. Wouldn't come near it, anyway, till the whole matter's been cleared up and the site's been blessed by a priest. 'Course, there was that thing this morning."

"This morning?" Lord Darcy lifted an eyebrow.

"Yes, my lord." He glanced at his wristwatch. "Just after we come on duty. Just on six hours ago—eight-twelve."

"And what happened?" his lord-

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ship asked with seemingly infinite patience.

"Well, these two folk come along the beach from the east. Romany, they was. Whole tribe of 'em come into St.-Matthew's-Church fairground early this morning. These two—man and a woman, they was—come along arm in arm. Dan—that's Armsman Danel, over there—warned 'em off, but they just smiled and waved and kept coming. So Dan went down to the beach fast and blocked 'em off. They pretended they didn't speak no Anglo-French; you know how these Romany are. But Dan made it clear they wasn't to come no farther, so off they went. No trouble."

"They went back without any argument, eh?"

"Yes, my lord, they did."

"Well, no harm done there, then. Carry on, Armsman."

"Yes, my lord."

Master Sean came back from the cliff edge with a chunk of thaumaturgically-hardened clay further loading his symbol-decorated carpetbag. "Anything else, me lord?"

"I think not. Let's get some lunch."

In a tent near the fairgrounds, an agent of *Serka*, Mission Commander for this particular operation, was opening what looked on the outside like a battered, scuffed, worn, old leather suitcase. The inside was new and in the best condition, and the contents were startlingly similar to those of Master Sean's symbol-decorated carpetbag.

Out came two small wands, scarcely six inches long, of ruby-red crystal wound with oddly-spaced helices of silver wire that took exactly five turns around the ruby core. Each wand was a mirror image of the other; one helix wound to the right, the other to the left. Out came two small glass flacons, one containing a white, coarsely-ground substance, the other an amber-yellow mass of small granules. These were followed by a curiously-wrought golden candlestick some four inches high, an inch-thick candle, and a small brazier.

Like any competent sorcerer, the Commander had hands that were strong and yet capable of delicate work. The beeswax candle was being fitted into the candlestick by those hands when there came a scratching at the closed tent flap.

The Commander froze. "Yes?"

"One-three-seven comes," said a whispered voice.

The Commander relaxed. "Very well; send him in."

Seconds later, the tent flap opened, and another *Serka* agent ducked into the tent. He glanced at the thaumaturgical equipment on the table as he sat down on a stool. "It's come to that, eh?" he said.

"I'm not certain yet," said the Commander. "It may. I don't want it to. I want to avoid any entanglement with Master Sean O Lochlainn. A man with his ability and power is a

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man to avoid when he's on the other side."

"Your pardon, Mission Commander, but just how certain are you that the man you saw on the mule this morning was actually Master Sean?"

"Quite certain. I heard him lecture many times at the University at Buda-Pest when I was an undergraduate there in 'sixty-eight, 'sixty-nine, and 'seventy. He was taking his ThD in theoretics and analog math. His King paid for it from the Privy Purse, but he supplemented his income by giving undergrad lectures."

"Would he recognize you?"

"Highly unlikely. Who pays any attention to undergraduate students at a large University?"

The Commander waved an impatient hand. "Let's hear your report."

"Yes, Mission Commander," Agent 137 said briskly. "I followed the man on muleback, as you ordered. He met another man, ahorse, coming from the village. He was tall, lean but muscular, with handsome, rather English-looking features. He was dressed as a merchant, but I suspected . . ."

The Commander nodded. "Lord Darcy. Obviously. Continue."

"You said they'd go to the site of the death, and when they took the left-hand bypass I was sure of it. I left off following and galloped on to the village, where Number 202 was waiting with the boat. We had a good westerly breeze, so we made it to the cove before them. We anchored and lay some two hundred yards offshore. Number 202 did some fishing while I watched through field glasses.

"They talked to the Armsmen atop the cliff for a while, then went down to the beach. One of the Armsmen pointed to where the body had been. Darcy went on talking to him for a while. Then Darcy walked around, looking at things. He went over to the base of the cliff and began digging. He found something; I couldn't see what.

"Master Sean put it in his bag, then, for ten minutes or so, he quartered the area where the body'd been, using one of those long, blue-black metal wands—you know—"

"A metal detector," said the Commander. "Yes. Go on."

"Yes. Lord Darcy dug every time O Lochlainn pointed something out. Dug up an awful lot of stuff. But he found *some*thing interesting. Don't know what it was; couldn't see it. But he stuck it in his pocket and gave it to the sorcerer later."

"I know what it was," said the Commander in a hard voice. "Was that the only thing that seemed to interest him?"

"Yes, as far as I could tell," said 137.

"Then what happened?"

137 shrugged. "They went back topside. Darcy talked to one of the Armsmen; the other watched the sorcerer dig a hole in the cliff face."

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The Mission Commander frowned. "Dig a hole? A *hole*?"

"That's right. Lay flat on his belly, reached down a couple of feet over the edge, and dug something out. Couldn't see what it was. Left a hole about the size of a man's two fists—maybe a bit bigger."

"Damn! Why couldn't you have watched more carefully?"

Agent 137's face stiffened. "It was very difficult to see well, Mission Commander. Any closer than two hundred yards, and we would have drawn attention. Did you ever try to focus six-by field glasses from a light boat bobbing up and down on the sea?"

"Calm down. I'm not angry with you. You did well. I just wish we had better information." The Commander looked thoughtful. "That tells us something. We can forget about the beach. Order the men to stay away; they are not to go there again for any reason.

"The Phial is not there now, if it ever was. If Master Sean did not find it, it wasn't there. If he *did* find it, it is gone now, and he and Lord Darcy know where it is. And that is a problem I must consider. Now get out of here and let me think."

Agent 137 got out.

The public room at the Green Seagull, as far as population went, looked like a London railway car at the rush hour.

Amidst all the hubbub, wine and beer crossed the bar in one direction, while copper and silver crossed it in the other, making everyone happy on both sides.

In the club bar, it was somewhat quieter, but the noise from the public bar was distinctly audible. The innkeeper himself was taking care of the customers in the club bar; he took a great deal of pride in his work. Besides, the tips were larger and the work easier.

"Would dere be anyting else for dee?" he asked as he set two pints of beer on one of the tables. "Someting to munch on, mayhap?"

"Not just now, Goodman Dreyque," said Father Art. "This will do us for a while."

"Very good. Fahder. Tank dee." He went quietly away.

Lord Darcy took a deep draught of his beer and sighed. "Cool beer is a great refresher on a midsummer evening. The Green Seagull keeps an excellent cellar. Food's good, too; Master Sean and I ate here this afternoon."

"Where is Master Sean now?" the priest asked.

"In the rooms you assigned us in the Rectory, amidst his apparatus, doing lab work on some evidence we dug up." His voice became soft. "Did you find out what happened here that night?"

"Pretty much." Father Art replied in the same low tones. "There are a few things which are still a little hazy, but I think we can fill in most of those areas."

Standish's quarry had arrived at

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the Green Seagull late in the afternoon of the fifth, giving the name "Richard Bourke." He was carrying only an attaché case, but since he had a horse and saddle and saddlebags, they were considered surety against indebtedness.

There were only six rooms for hire in the inn, all on the upper floor of the two-storied building. Two of these were already occupied. At two-ten, the man Danglars had come in and registered for himself and his mistress, Jizelle de Ville.

"Bourke," said Father Art, "came in at five-fifteen. Nobody else at all checked in during that evening. And nobody saw a young man wearing evening clothes." He paused and smiled brightly. "How-*ev*-er . . ."

"Ahhh. I knew I could depend on you, my dear Arthur. What was it?"

Still smiling seraphically, the good father raised a finger and said: "The Case of the Sexton's Cloak."

"You fascinate me. Pray elucidate."

"My sexton," said Father Art, "has an old cloak, originally made from a couple of used horse blankets, so it wasn't exactly beautiful when new. But it *is* warm. He uses it when he has to work outside in winter. In summer, he hangs it in the stable behind the church. Claims it keeps the moths out—the smell, I mean.

"On the morning of sixth June, one of the men who works here in the inn brought it over to the church, asked my sexton if it were his. It was. Want to take a wild, silly guess where it was found?" Father Art asked.

"Does the room used by Bourke face the front or the rear?"

"The rear."

"Then it was found on the cobblestones at the rear of the building."

Smiling even more broadly, Father Art gently clapped his hands together once. "Precisely, my lord."

Lord Darcy smiled back. "Let's reconstruct. Bourke went to his room before five-thirty. Right?"

"Right. One of the maids went with him, let him in, and gave him the key."

"Was he ever seen again?"

"Only once. He ordered a light meal, and it was brought up about six. That's the last time he was seen."

"Were either of the other guests in the house at the time?"

"No. The man Danglars had left about four-thirty, and hadn't returned. No one saw Mistress Jizelle leave, but the girl who turns down the beds says that both rooms were empty at six. Bourke was still there at the time."

"Hmmmm."

Lord Darcy looked into the depths of his beer. After half a minute, he said: "Reverend Father, was a stranger in an old horse-blanket cloak actually seen in this inn, or are we speculating in insubstantial mist?"

Father Art's mouth twisted in a small grimace. "Not totally insubstantial, my lord, but not strong, either. The barmaid who was on duty that night says she remembers a

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couple of strangers who came in, but she doesn't remember anything about them. She's not terribly bright."

Lord Darcy chuckled. "All right, then. Let's assume that Standish actually came in here in a stolen—and uncomfortably warm—cloak. How did that come about, and what happened afterwards?"

Father Art fired up his old briar and took another sip from his seidel of beer. "Well, let's see. Standish comes into the village an hour after Bourke—perhaps a little more. But he doesn't come in directly; he circles round behind the church. Why? Not to steal the cloak. How would he know it was there?" He took two puffs from his pipe, then his eyes brightened. "Of course. To tether his horse. He didn't want it seen in the public square, and knew it would be safe in the church stable." Two more puffs.

"Hmmm. He sees the cloak on the stable wall and realizes that it will serve as a disguise, covering his evening dress. He borrows it and comes here to the inn. He makes sure that Bourke is firmly in place, then goes back to his horse and hightails it for Caen to send word to Sir James. Then he comes back here to the Green Seagull. He waits until nobody's looking, then sneaks up the stair to Bourke's room."

The priest stopped, scowled, and took a good, healthy drink from his seidel. "Some time later, he went out the window to the courtyard below, losing the cloak in the process." He shook his head. "But what happened between the time he went upstairs and the time he dropped the cloak, and what happened between then and his death, I haven't the foggiest conjecture."

"I have several," Lord Darcy said, "but they are all very, very foggy. We need more data. I have several questions." He ticked them off on his fingers. "One: Where is Bourke? Two: Who shot Standish? Three: *Why* was he shot? Four: What happened here at the inn? Five: What happened on the beach? And, finally: *Where is the Ipswich Phial?*"

Father Art lifted his seidel, drained its contents on one extended draught, set it firmly on the table, and said: "I don't know. God does."

Lord Darcy nodded. "Indeed; and one of His greatest attributes is that if you ask Him the right question in the right way, He will always give you an answer."

"You intend to pray for answers to those questions, my lord?"

"That, yes. But I have found that the best way to ask God about questions like these is to go out and dig up the data yourself."

Father Art smiled. "*Dominus vobiscum.*"

"*Et cum spiritu tuo.*" Lord Darcy responded.

"*Excavemus*!" said the priest.

In his room in the Rectory, Master

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Sean had carefully set up his apparatus on the table. Noel Standish's .36 Heron was clamped securely into a padded vise which stood at one end of the table. Three feet in front of the muzzle, the bullet which Lord Darcy had dug from the sand had been carefully placed on a small pedestal, so that it was at exactly the same height as the muzzle. He was using certain instruments to make sure that the axis of the bullet was accurately aligned with the axis of the Heron's barrel when a rhythmic code knock came at the door. The sorcerer went over to the door, unbolted it, opened it, and said: "Come in, me lord."

"I hope I didn't interrupt anything," Lord Darcy said.

"Not at all, me lord." Master Sean carefully closed and bolted the door again. "I was just getting ready for the ballistics test. The similarity relationship tests have already assured me that the slug was the one that killed Standish. There's only to see if it came from his own gun. Have you found any further clues?"

"None," Lord Darcy admitted. "I managed to get a good look at the guest rooms in the Green Seagull. Nothing. Flat nothing. I have several ideas, but no evidence." Then he gestured at the handgun. "Pray proceed with your work. I will be most happy to wait."

"It'll only be a minute or so," Master Sean said apologetically. He went back to the table and continued his preparations while Lord Darcy watched in silence. His lordship was well aware of the principle involved; he had seen the test innumerable times. He recalled a lecture that Master Sean had once given on the subject.

"You see," the sorcerer had said, "the Principle of Relevance is important here. Most of the wear on a gun is purely mechanical. It don't matter *who* pulls the trigger, you see; the erosion caused by the gases produced in the chamber, and the wear caused by the bullet's passing through the barrel will be the same. It's not relevant *to the gun* who pulled the trigger or what it was fired at. But, *to the bullet* it *is* relevant which gun it was fired from and what it hit. All this can be determined by the proper spells."

In spite of having seen it many times, Lord Darcy always liked to watch the test because it was rather spectacular when the test was positive. Master Sean sprinkled a small amount of previously charged powder on both the bullet and the gun. Then he raised his wand and said an incantation under his breath.

At the last syllable of the incantation, there was a sound as if someone had sharply struck a cracked bell as the bullet vanished. The .36 Heron shivered in its vise.

Master Sean let out his breath. "Just like a homing pigeon, me lord. Gun and bullet match."

"I've often wondered why the bullet does that," Lord Darcy said.

Master Sean chuckled. "Call it an induced return-to-the-womb fixa-

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tion, me lord. Was there something you wanted?"

"A couple of things." Lord Darcy walked over to his suitcase, opened it, and took out a holstered handgun. It was a precision-made .40 caliber MacGregor—a heavy man-stopper.

While he checked out the MacGregor itself, he said: "This is one. The other is a question. How long before his body was found did Standish die?"

Master Sean rubbed the side of his nose with a thick finger. "Well, the investigative sorcerer at Caen, a good journeyman, placed the time as not more than fifteen minutes before the body was discovered. My own tests showed not more than twenty-five minutes, but not even the best preservative spell can keep something like that from blurring after a week has passed."

Lord Darcy slid the MacGregor into its snugly-fitted holster and adjusted his jacket to cover it. "In other words, there's the usual hazy area. The bruises and fractures were definitely inflicted before death?"

"Definitely, my lord. About three hours before, give or take that same fifteen minutes."

"I see. Interesting. Very interesting." He looked in the wall mirror and adjusted his neckpiece. "Have you further work to do?"

"Only the analysis on the knife," Master Sean said.

Lord Darcy turned from the mirror. "Will you fix me up with a tracer? I'm going out to stroll about the village and possibly to the fairgrounds and the tent city. I anticipate no danger, but I don't want to get lost, either."

"Very well, me lord," the sorcerer said with resignation. He opened his symbol-decorated carpetbag and took out a little wooden box. It held what looked remarkably like one-inch toothpicks, except that they were evenly cylindrical, not tapered, and they were made of ash instead of pine. He selected one and put the box back in his bag. He handed the little cylinder to Lord Darcy, who took it between the thumb and forefinger of his right hand.

Then the master sorcerer took a

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little scented oil on his right thumb from a special golden oil stock and rubbed it along the sliver of ash, from Lord Darcy's thumb to the other end. Then he grasped that end in his own right thumb and forefinger.

A quick motion of both wrists, and the ashen splinter snapped.

But, psychically and symbolically, the halves were still part of an unbroken whole. As long as each man carried his half, the two of them were specially linked.

"Thank you, my dear Sean," Lord Darcy said. "And now I shall be off to enjoy the nightlife of the teeming metropolis surrounding us."

With that, he was gone, and Master Sean returned to his work.

The sun was a fat, squashed-looking, red-orange ellipsoid seated neatly on the horizon when Lord Darcy stepped out of the gate of the churchyard. It would be gone in a few minutes. The long shadow of the church spire reached out across the village and into the fields. The colors of the flags and banners and bunting around the village were altered in value by the reddish light. The weather had been beautiful and clear all day, and would continue to be, according to the Weather Bureau predictors. It would be a fine night.

"Please, my lord—are you Lord Darcy?"

Lord Darcy had noticed the woman come out of the church, but the village square was full of people, and he had paid little attention. Now he turned his full attention on her and was pleasantly surprised. She was quite the loveliest creature he had seen in a long time.

"I am, Damoselle," he said with a smile. "But I fear you have the advantage of me."

Her own smile was timid, almost frightened. "I am named Sharolta."

Her name, her slight accent, and her clothing all proclaimed her Romany. Her long, softly dark hair and her dark eyes, her well-formed nose and her full, almost too-perfect lips, along with her magnificently lush body, accentuated by the Romany costume, proclaimed her beautiful.

"May I be of help to you, Damoselle Sharolta?"

She shook her head. "No, no. I ask nothing. But perhaps I can be of help to you." Her smile seemed to quaver. "Can we go somewhere to talk?"

"Where, for instance?" Lord Darcy asked carefully.

"Anywhere you say, my lord. Anywhere, so long as it is private." Then she flushed. "I—I mean, not *too much* private. I mean, where we can talk. You know."

"Of course. It is not yet time for Vespers; I suggest that we go into the church," Lord Darcy said.

"Yes, yes. That would be fine." She smiled. "There were not many folk in there. It should be fine."

The interior of the Church of St. Matthew was darkened, but far from being gloomy. The flickering clusters

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of candles around the statues and icons were like twinkling, multicolored star clusters.

Lord Darcy and the Damoselle Sharolta sat down in one of the rear pews. Most of the dozen or so people who were in the church were farther up toward the altar, praying; there was no one within earshot of the place Lord Darcy had chosen.

Lord Darcy waited in silence for the girl to speak. The Romany become silent under pressure: create a vacuum for them to fill, and the words come tumbling over each other in eloquent eagerness.

"You are the great Lord Darcy, the great Investigator," she began suddenly. "You are looking into the death of the poor Goodman Standish who was found on the beach a week ago. Is all this not so?"

Lord Darcy nodded silently.

"Well, then, there must be something wrong about that man's death, or you would not be here. So I must tell you what I know."

"A week ago, there came to our tribe a group of five men. They said they were from the tribe of Chanro—the Sword—which is in the area of Buda-Pest. Their leader, who calls himself Suv—the Needle—asked our chief for aid and sanctuary, as it is their right, and it was granted. But they are very secretive among themselves. They behave very well, mind you; I don't mean they are rude or boorish, or anything like that. But there is—how do I say it?—there is a *wrongness* about them.

"This morning, for instance, I must tell you of that. The man who calls himself Suv wanted me to walk along the beach with him. I did not want to, for I do not find him an attractive man—you understand?"

Again his lordship nodded. "Of course."

"But he said he meant nothing like that. He said he wanted to walk along the sea, but he did not want to walk alone. He said he would show me all the shore life—the birds, the things in the pools, the plants. I was interested, and I thought there would be no harm, so I went.

"He was true to his word. He did not try to make love to me. It was nice for a while. He showed me the tide pools and pointed out the different kinds of things in them. One had a jellyfish." She looked up from her hands, and there was a frown on her face.

"Then we got near to that little cove where the body was found. I wanted to turn back, but he said, no, he wanted to look at it. I said I wouldn't and started back. Then he told me that if I didn't, he'd break my arm. So I went." She seemed to shiver a little under her bright dress. "When the Armsman showed up, he kept on going, pretending he didn't understand Anglo-French. Then we saw that there were two of them, the Armsmen, I mean. So we turned around and went back. Suv was very furious."

She stopped and said no more.

"My dear," he asked gently, "why

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does one of the Romany come to the authorities with a story like this? Do not the Romany take care of their own?"

"Yes, my lord. But these men are not Rom."

"Oh?"

"Their tent is next to mine. I have heard them talking when they think no one is listening. I do not understand it very well, but I know it when I hear it: they were speaking *Burgdeutsch*."

"I see," said Lord Darcy softly and thoughtfully. The German of Brandenburg was the court language of Poland, which suddenly made everything very interesting indeed.

"Do you suppose, Damoselle," he said, "that you could point out this Suv to me?"

She looked up at him with those great wonderful eyes and smiled. "I'm sure I could, my lord. Come; wrap your cloak about you and we shall walk through the village."

Outside the church, the darkness was relieved only by the regulation gaslamps of the various business places, and by the quarter moon hanging high in the sky, like a half-closed eye.

In the deeper darkness of the church porch, Lord Darcy, rather much to his surprise, took the girl in his arms and kissed her, with her warm cooperation. It was several wordless minutes before they went out to the street.

Master Sean woke to the six o'clock Angelus bell feeling vaguely uneasy. A quick mental focus on his half of the tracer told him that Lord Darcy was in no danger. Actually, if he had been, Sean would have wakened immediately.

But he still had that odd feeling when he went down to Mass at seven; he had trouble keeping in his mind his prayers for the intercession of St. Basil the Great, and couldn't really bring his mind to focus until the Sanctus.

After Mass, he went up to Father Art's small parlor in the rectory, where he had been asked to break his fast, and was mildly surprised to find Sir James le Lien with the priest.

"Good morning, Master Sean." Sir James said calmly. "Have you found the Phial yet?"

The sorcerer shook his head. "Not so far as I know."

Sir James munched a buttered biscuit and sipped hot black caffe. Despite his calm expression Master Sean could tell that he was worried.

"I am afraid," Sir James said carefully, "we've been outfoxed."

"How so?" Father Art asked.

"Well, either the *Serka* have got it, or they think we have it safely away from them. They seem to have given the whole thing over." He drank more caffe. "Just after midnight, every known *Serka* agent in the area eluded our men and vanished. They dropped out of sight, and we haven't spotted a single one in over eight hours. We have reason to believe that some of them went south,

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toward Caen; some went west, toward Cherbourg; others are heading east, toward Harfleur."

Master Sean frowned. "And you think—"

"I think they found the Ipswich Phial and one of their men is carrying it to Krakowa. Or at least across the Polish border. I rode to Caen and made more teleson calls than I've ever made in so short a time in my life. There's a net out now, and we can only hope we can find the man with the Phial. Otherwise . . ." He closed his eyes. "Otherwise, we may be faced with an overland attack by the armies of His Slavonic Majesty, through one or more of the German states. God help us."

After what seemed like a terribly long time, Master Sean said: "Sir James, is there any likelihood that Noel Standish would have used a knife on the sealed Phial?"

"I don't know. Why do you ask?"

"We found a knife near where Standish's body was discovered. My tests show gold on the knife edge."

"May I see it?" Sir James asked.

"Certainly. I'll fetch it. Excuse me a minute."

He left the parlor and went down the rather narrow hallway of the rectory. From the nearby church came the soft chime of a small bell. The eight o'clock Mass was beginning.

Master Sean opened the door of his room . . .

. . . and stood stock still, staring, for a full fifteen seconds, while his eyes and other senses took in the room.

Then, without moving, he shouted: "Sir James! Father Art! Come here! Quickly!"

Both men came running. They stopped at the door.

"What's the matter?" Sir James snapped.

"Somebody," said Master Sean in an angry rumble, "has been prowlin' about in me room! And a trick like that is likely to be after gettin' me Irish up!" Master Sean's brogue varied with his mood. When he was calmly lecturing or discussing, it became almost nonexistent. But when he became angry . . .

He strode into the room for a closer look at the table which he had been using for his thaumaturgical analyses. In the center was a heap of crumbled clay. "They've destroyed me evidence! Look at that!" Master Sean pointed to the heap of crumbled clay on the table.

"And what is it, if I may ask?"

Master Sean explained about the letters that had been cut in the cliff face, and how he had taken the chunk of clay out for further examination.

"And this knife was used to cut the letters." He gestured toward the knife on the table nearby. "I haven't been able to check it against Standish's body yet."

"That's the one with the gold traces on the blade?" Sir James asked.

"It is."

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"Well, it's Standish's knife, all right. I've seen it many times. I could even tell you how he got that deep cut in the ivory hilt." He looked thoughtful. "S. . .S . . .O. . ." After a moment, he shook his head. "Means nothing to me. Can't think what it might have meant to Standish."

"Means nothing to me, either." Father Art admitted.

"Well, now," said the stout little Irish sorcerer, "Standish must have been at the top of the cliff when he wrote it. What would be right side up to him would be inverted to anyone standing below. How about OSS?"

Again Sir James thought. Again he shook his head. "Still nothing, Master Sean. Father?"

The priest shook his head. "Nothing, I'm afraid."

Sir James said: "This was obviously done by a *Serka* agent. But why? And how did he get in here without your knowing it?"

Master Sean scowled. "To a sorcerer, that's obvious. First, whoever did it is an accomplished sorcerer himself, or he'd never have made it past that avoidance spell, which is keyed only to meself and to his lordship. Second, he picked exactly the right time—when I was at Mass and had me mind concentrated elsewhere so I wouldn't notice what he was up to. Were I doing it meself, I'd have started just as the Sanctus bell was rung. After that—no problem." He looked glum. "I just wasn't expecting it, that's all."

"I wish I could have seen that carving in the clay," Sir James said.

"Well, you can see the cast if they didn't—" Master Sean pulled open a desk drawer. "No, they didn't." He pulled out a thin slab of plaster. "I made this with quick-setting plaster. It's reversed, of course, but you can look at it in the mirror, over there."

Sir James took the slab, but didn't look at it immediately. His eyes were still on the heap of clay. "Do you suppose that Standish might have buried the Ipswich Phial in that clay to keep it from being found?"

Master Sean's eyes widened. "Great Heaven! It could be! With an auric-stabilized psychic shield around it, I'd not have perceived it at all!"

Sir James groaned. "That answers the question, *Why?*—doesn't it?"

"So it would seem," murmured Father Art.

Bleakly, Sir James held the plaster slab up to the mirror above the dresser. "SSO. No. Wait." He inverted it, and his lean face went pale. "Oh, no, God," he said softly. "Oh, please. No."

"What is it?" the priest asked. "Does OSS mean something?"

"Not OSS," Sir James said still more softly. "055. Number 055 of the *Serka*. Olga Polovski, the most beautiful and the most dangerous woman in Europe."

It was at that moment that the sun went out.

The Reverend Father Mac Ken-

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nalty had turned to the congregation and asked them to lift up their hearts to the Lord that they might properly assist at the Holy Sacrifice of the Altar, when a cloud seemed to pass over the sun, dimming the light that streamed in through the stained glass windows. Even the candles on the Altar seemed to dim a little.

He hardly noticed it; it was a common enough occurrence. Without a pause, he asked the people to give thanks to the Lord God, and continued with the Mass.

In the utter blackness of the room, three men stood for a moment in silence.

"Well, that tears it," said Sir James's voice in the darkness. There was a noticeable lack of surprise or panic in his voice.

"So you lied to his lordship," said Master Sean.

"He did indeed," said Father Art.

"What do you mean?" Sir James asked testily.

"You said," Master Sean pointed out with more than a touch of acid in his voice, "that you didn't know what the Ipswich Phial is supposed to do."

"What makes you think I *do*?"

"In the first place, this darkness came as no surprise to you. In the second, you must have known what it was, because Noel Standish knew."

"I had my orders," Sir James le Lien said in a hard voice. "That's not the point now. The damned thing is being used. I—"

"*Listen*!" Father Art's voice cut in sharply. "*Listen!*"

In the blackness, all of them heard the sweet triple tone of the Sanctus bell.

Holy . . . Holy . . . Holy . . . Lord God Sabaoth . . .

"What—?" Sir James's low voice was querulous.

"Don't you understand?" Father Art asked. "The field of suppression doesn't extend as far as the church. Father Mac Kennalty could go on with the Mass in the dark, from memory. But the congregation wouldn't be likely to. They certainly don't sound upset."

"You're right, Father," Master Sean said. "That gives us the range, doesn't it? Let's see if we can feel our way out of here, toward the church. His lordship may be in trouble."

"Follow me," said the priest. "I know this church like I know my own face. Take my hand and follow me."

Cautiously, the three men moved from the darkness toward the light. They were still heading for the stairway when the sun came on again.

Lord Darcy rode into the stableyard behind the Church of St. Matthew, where four men were waiting for him. The sexton took his horse as he dismounted, and led it away to the stable. The other three just waited, expectantly.

"I could do with a cup of caffe, heavily laced with brandy, and a

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plate of ham and eggs, if they're available," said Lord Darcy with a rather dreamy smile. "If not, I'll just have the caffe and brandy."

"What's happened?" Sir James blurted abruptly.

Lord Darcy patted the air with a hand. "All in good time, my dear James; all in good time. Nothing's amiss, I assure you."

"I think a breakfast such as that could be arranged," Father Art said with a smile. "Come along."

The caffe and brandy came immediately, served by Father Art in a large mug. "The ham and eggs should be along pretty quickly," the priest said.

"Excellent! You're the perfect host, Father." Lord Darcy took a bracing jolt from the mug, then fished in his waistcoat pocket with thumb and forefinger. "Oh, by the by, Sir James, here's your play-pretty." He held up a small golden tube.

Sir James took it and looked at it while Master Sean scowled at it in a way that made him seem rather cross-eyed.

"The seal has been cut," Sir James said.

"Yes. By your man, Standish. I suggest you give the thing to Master Sean for resealing until you get it back to Ipswich."

Sir James gave the Phial to Master Sean. "How did you get it back from them?" the King's Agent asked.

"I didn't." Lord Darcy settled himself back in the big chair. "If you'll be patient, I'll explain. Last evening, I was approached by a young woman . . ."

His lordship repeated the entire conversation verbatim, and told them of her gestures and expressions while they were talking inside the church.

"And you went with her?" Sir James asked incredulously.

"Certainly. For two very good reasons. *Primus*: I had to find out what was behind her story. *Secundus*: I had fallen in love."

Sir James gawked. Master Sean's face became expressionless. Father Art cast his eyes toward Heaven.

Sir James found his voice first. "In *love*?" It was almost a squawk.

Lord Darcy nodded calmly. "In love. Deeply. Madly. Passionately."

Sir James shot to his feet. "Are you mad, Darcy? Don't you realize that that woman is a *Serka* agent?"

"So indeed I had surmised. Sit down, James; such outbursts are unseemly." Sir James sat down slowly. "Now pay attention," Lord Darcy continued. "Of course I knew she was a spy. If you had been listening closely when I quoted her words, you would have heard that she said I was investigating the death of *Standish*. And yet everyone here knows that the body was identified as *Bourke*. Obviously, she had recognized Standish and knew his name."

"Standish had recognized her, too," Sir James said. "Secret Agent Number 055, of *Serka*. Real name: Olga Polovski."

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"Olga," Lord Darcy said, savoring the word. "That's a pretty name, isn't it?"

"Charming. Utterly enchanting. And in spite of the fact that she's a Polish agent, you love the wench?"

"I didn't say that, Sir James," said Lord Darcy. "I did not say I loved her; I said I was 'in love' with her. There is a fine distinction there, and I have had enough experience to be able to distinguish between the two states of mind. Your use of the word 'enchanting' is quite apropos, by the way. The emotion was artificially induced. The woman is a sorceress."

Master Sean suddenly snapped his fingers. "*That's* where I heard the name before! Olga Polovski! Six years ago, she was an undergraduate at the University in Buda-Pest. A good student, with high-grade Talent. No wonder you 'fell in love' with her."

Sir James narrowed his eyes. "I see. The purpose was to get information out of you. Did she succeed?"

"In a way." Lord Darcy chuckled. "I sang like a nightingale. Indeed, Darcy's *Mendacious Cantata*, sung *forte e claro*, may become one of the most acclaimed works of art of the twentieth century. Pardon me; I am euphoric."

"You have popped your parietals, my lord," Sir James said, with a slight edge to his voice. "What was the result of this baritone solo?"

"Actually, it was a duet. We alternated on the versicles and responses. The theme of my song was simply that I was a criminal investigator and nothing more. That I hadn't more than a vague notion of what His Imperial Majesty's Secret Service was up to. That, for some reason, the apprehension of this murderer was most important to the Secret Service, so their agents were hanging around to help me. That they were more hinderance than help." He paused to take another swallow of laced caffe, then continued: "And—oh, yes—that they must be going to England for more men, because, four days ago, a heavily armed group of four men took a Navy cutter from Harfleur for London."

Sir James frowned for a second, then his face lit up. "Ah, yes. You implied that we had already found the Phial and that it was safely in England."

"Precisely. And since she had not heard of that oh-so-secret departure, she was certain that it could not be a bluff. As a result, she scrubbed the entire mission. Around midnight, she excused herself for a moment and spoke to someone—I presume it was the second in command, the much-maligned Suv. Her men took off to three of the four winds."

"And she didn't?"

"Of course not. Why arouse my suspicions? Better to keep me under observation while her men made good their escape. I left her shortly after dawn, and—"

"You were there from sunset till

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dawn? What took you so long?"

Lord Darcy looked pained. "My dear James, surely you don't think I could simply hand her all that misinformation in half an hour without her becoming suspicious. I had to allow her to draw it from me, bit by bit. I had to allow her to give me more information than she intended to give in order to get the story out of me. And, of course, *she* had to be very careful in order not to arouse *my* suspicions. It was, I assure you, a very delicate and time-consuming series of negotiations."

Sir James did his best not to leer. "I can well imagine."

Father Art looked out the window, solemnly puffing his pipe as though he were in deep meditation and could hear nothing.

Rather hurriedly, Master Sean said: "Then it was you who broke the clay brick I dug out of the cliff, me lord."

"It was; I'm sorry I didn't tell you, but you were at Mass, and I was in somewhat of a hurry. You see, there were only two places where the Phial could possibly be, and I looked in the less likely place first—in that lump of clay. Standish *could* have hidden it there, but I thought it unlikely. Still, I had to look. It wasn't there.

"So I got my horse and rode out to where the body was found. You see, Standish *had* to have had it with him. He opened it to get away from his pursuers. I presume Master Sean knows how the thing works, but all I know is that it renders everyone blind for a radius of about a mile and a half."

Master Sean cleared his throat. "It's akin to what's called hysterical blindness. Nothing wrong with the eyes, ye see, but the mind blocks off the visual centers of the brain. The Phial contains a charged rod attached to the stopper. When you open it and expose the rod everything goes black. That's the reason for the auric-stabilized psychic shield which forms the Phial itself."

"Things don't go black for the person holding it," said Lord Darcy. "Everything becomes a colorless gray, but you can still see."

"That's the built-in safety spell in the stopper," said the little Irish sorcerer.

"Well, where *was* the blasted thing?" Sir James asked.

"Buried in the sand, almost under that big rock where his body was found. I just had to dig till I found it." Lord Darcy looked somber. "I fear my analytical powers are deserting me; otherwise, Master Sean and I would have found it yesterday. But I relied on his metal detector to find it. And yet, Master Sean clearly told me that a psychic shield renders anything psychically invisible. He was talking about Standish, of course, but I should have seen that the same logic applied to the Ipswich Phial as well."

"If ye'd told me what ye were looking for, me lord . . ." Master Sean said gently.

Lord Darcy chuckled mirthlessly.

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"After all our years together, my dear Sean, we still tend to overestimate each other. I assumed you had deduced what we were looking for, though you are no detective; you assumed I knew about psychic shielding, though I am no thaumaturge."

"I still can't quite see the entire chain of events," Father Art said. "Could you clarify it for us? What was Standish doing out on that beach, anyway?"

"Well, let's go back to the night before he was killed. He had been following the mysterious Bourke. When Bourke was firmly ensconced in the Green Seagull, Standish rode for Caen, notified you via teleson, then rode back. He borrowed the sexton's cloak and went over to the inn. When he saw his chance, he dodged upstairs fast and went to Bourke's room presumably to get the Phial.

"Now, you must keep in mind that all this is conjecture. I can't prove it, and I know of no way to prove it. I do not have, and cannot get, all the evidence I would need for *proof*. But all the data I *do* have leads inescapably to one line of action.

"Master Sean claims I have a touch of the Talent—the ability to leap from an unwarranted assumption to a foregone conclusion. That may be so. At any rate, I *know* what happened.

"Very well, then. Standish went into Bourke's room to arrest him. He *knew* Bourke was in that room because he was psychically locked on to Bourke.

"But when he broke into the room he was confronted by a woman—a woman he knew. The woman was just as surprised to see Standish.

"I don't know which of them recovered first, but I strongly suspect it was the woman. Number 055 is very quick on the uptake, believe me.

"But Standish was stronger. He sustained a few good bruises in the next several seconds, but he knocked her unconscious. I saw the bruise on her neck last night.

"He searched the room and found the Phial. Unfortunately, the noise had attracted two, possibly three, of her fellow *Serka* agents. He had to go out the window, losing his cloak in the process. The men followed him.

"He ran for the beach, and—"

"Wait a minute." Sir James interrupted. "You mean Bourke was actually Olga Polovski in disguise?"

"Certainly. She's a consummate actress. The idea was for Bourke to vanish completely. She knew the Secret Service would be after her, and she wanted to leave no trace. But she didn't realize that Standish was so close behind her because he was psychically invisible. That's why she was shocked when he came into her room.

"At any rate, he ran for the beach. There was no place else to go at that time of night, except for the church, and they'd have him trapped there.

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"I must admit I'm very fuzzy about what happened during that chase, but remember he had ridden for two days without much rest, and he was battered a little by the blows Olga had landed. At any rate, he eventually found himself at the edge of that cliff, with *Serka* closing in around him. .Remember, it was a moonless night, and there were only stars for him to see by. But at least one of the Polish agents had a lantern.

"Standish was trapped on the edge of a cliff, and he had no way to see how far down it went, nor what was at the bottom. He lay flat and kept quiet, but the others were getting close. He decided to get rid of the Phial. Better to lose it than have it fall into King Casimir's hands. He took out his knife and carved the '055' in the side of the cliff, to mark the spot and to make sure that someone else would see it if he were killed. I'm sure he intended to dig a hole and bury it there. I don't believe he was thinking too clearly by then.

"The *Serka* men were getting too close for comfort. He might be seen at any moment. So he cut the seal of the Phial and opened it. Blackout.

"Since he could see his pursuers—however dimly—and they couldn't see him, he decided to try to get past them, back to the village. If he had a time advantage, he could find a place to hide.

"He stood up.

"But as he turned, he made a misstep and fell twenty feet to the sand below." Lord Darcy paused.

Father Art, looking thoughtful, said: "He had a gun. Why didn't he use it?"

"Because they had guns, too, and he was outnumbered. He didn't want to betray his position by the muzzle flash unless he had to." Lord Darcy said. "To continue: The fall is what broke those ribs and sprained that wrist. It also very likely knocked him out for a few minutes. Not long. When he came to, he must have realized he had an advantage greater than he had thought at first. The *Serka* couldn't see the muzzle flash from his handgun. Badly hurt as he was, he waited for them."

"Admirable," said Father Art. "It's fantastic that he didn't lose the two parts of the Phial when he fell. Must have hung on for dear life."

"Standish would," said Sir James grimly. "Go on, my lord."

"Well, at that point, the *Serka* lads must have realized the same thing. They had no way of knowing how badly Standish was hurt, nor exactly where he was. He could be sneaking up on them, for all they knew. They got out of there. Slowly, of course, since they had to feel their way, but once they reached the Old Shore Road, they made better time.

"But by that time, Standish was close to passing out again. He still had to hide the Phial, so he buried it in the sand where I found it."

"Me lord," said Master Sean, "I still don't understand who killed Standish and why."

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"Oh, that. Why that was patently obvious from the first. Wasn't it, Father Art?"

The good father stared at Lord Darcy. "Begging your pardon, my lord, but not to *me* it wasn't."

Lord Darcy turned his head. "Sir James?"

"No."

"Oh, dear. Well, I suppose I shall have to back up a bit, then. Consider: The Damoselle Olga, to cover her tracks, has to get rid of 'Bourke'. But if 'Bourke' disappears into nowhere, and someone else appears from nowhere, even a moron might suspect that the two were the same. So a cover must be arranged. Someone else, not connected in any way with 'Bourke', must appear at the Green Seagull *before* 'Bourke' shows up.

"So, what happens? A coachman named Danglars shows up; a servant who registers for himself and his mistress, Jizelle de Ville. (Danglars and Suv were almost certainly the same man, by the way.) But who sees Mistress Jizelle? Nobody. *She is only a name in a register book until the next morning!*

"The original plan was to have Mistress Jizelle show up in the evening, then have Bourke show up again, and so on. The idea was to firmly establish that the two people were separate and not at all connected. The arrival and intrusion of Standish changed all that, but things worked out fairly well, nonetheless.

"It *had* to be 'Mistress Jizelle' who killed him. Look at the evidence. Standish died—correct me if I'm wrong, Master Sean—within plus or minus fifteen minutes of the time Standish was found."

Master Sean nodded.

"Naturally," his lordship continued, "we always assume a minus time. How could the person be killed *after* the body was found?

"But there was no one else around who could have killed him! A farmer and his two sons were close enough to the road during that time to see anyone who came along unless that someone had walked along the beach. But there were no footprints in that damp sand except those of 'Mistress Jizelle'!

"Picture this, if you will: Number 055, still a little groggy, and suffering from a sore neck, is told by her returning henchmen that they have lost Standish. But she is clever enough to see what must have happened. As soon as possible, she puts on her 'Mistress Jizelle' *persona* and has her lieutenant drive her out to that section of the beach. She walks down to take a look. She sees Standish.

"Standish, meanwhile, has regained his senses. He opens his eyes and sees Olga Polovski. His gun is still in his hand. He tries to level it at her. She jumps him, in fear of her life. A struggle. The gun goes off. *Finis.*"

"Wouldn't the farmers have heard the shot?" Master Sean asked.

"At that distance, with a brisk

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wind blowing, the sea pounding, and a cliff to baffle the sound, it would be hard to hear a pistol shot. That one was further muffled by the fact that the muzzle was against Standish's head. No, it wouldn't have been heard."

"Why did her footprints only come up to some five yards from the body?" Sir James asked. "There were no prints in the dry sand."

"Partly because she smoothed her prints out, partly because of the wind, which blew enough to cover them. She was shaken and worried, but she did take time to search the body for the Phial. Naturally, she didn't want any evidence of that search around. She went back to consult Danglars-Suv about what to do next. When she saw the farmers, there was nothing she could do but bluff it through. Which, I must say, she did magnificently."

"Indeed." Sir James le Lien looked both cold and grim. "Where is she now?"

"By now, she has taken horse and departed."

"Riding sidesaddle, no doubt." His voice was as cold as his expression. "So you let her get away. Why didn't you arrest her?"

"On what evidence? Don't be a fool, Sir James. What would you charge her with? Could you swear in His Majesty's Court of High Justice that 'Mistress Jizelle' was actually Olga Polovski? If I had tried to arrest her, I would have been a corpse by now in that Romany camp, even if I'd had the evidence. Since I did not and do not have that evidence, there would be no point.

"I would not call it a satisfactory case, no. But you have the Phial, which was what you wanted. I'm afraid the death of Noel Standish will have to be written off as enemy action during the course of a war. It was not first degree murder; it was, as Master Sean put it yesterday, a case of accidental murder."

"But–"

Lord Darcy leaned back in the chair and closed his eyes. "Drop it, Sir James. You'll get her eventually."

Then, very quietly, he began to snore.

"I'll be damned!" said Sir James. "I worked all night on my feet and found nothing. He spends all night in bed with the most beautiful woman in Europe and gets all the answers."

"It all depends on your method of approach," Master Sean said. He opened his symbol-decorated carpetbag and took out a large, heavy book.

"Oh, certainly," said Sir James bitterly. "Some work vertically, some horizontally."

Father Arthur Lyon continued to stare out the window, hearing nothing he didn't mean to hear.

"What are you looking up there, in that grimoire?" he asked Master Sean after a moment.

"*Spells, infatuation; removal of*," said Master Sean calmly. ■

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ANSWER IN COLD stone

NEVIN WASHINGTON

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Cultural evolution is faster than physical evolution. But some cultures become locked, and cannot change—although individual members of that culture can change. And do.

STEPHEN LEIGH

It is in my family to hate.

When I was much younger, I heard on many occasions the wailing cacophony of the dirgepipes. Our home had always stood unconcealed along the rutted path that led to the gravepit, and funerary parades would pass the house and start up the long, wooded hill that led to Gehenah. Somehow in these memories the day is always cloudy, as if the storming of the pipes compelled the clouds to curtain the light, cloaking the procession in a shroud of dusk. I only rarely recall any rain—perhaps I thought that the noise startled the banked clouds into holding their moisture. I would feel vaguely happy for the dead ones, because the faces of the mourners, chalky with funeral paint, were set in pained expressions that I associated with the discordant and strident music. I would put my hands to my ears and go back inside the house. Death was well known to me, and I feared it. Gehenah had taken both of my older brothers.

On the day of my parents' funeral—they were murdered after the Flood Day Insurrection; not unjustly, for they were among the leaders—it rained, as is usual for that season. The waters from the Western Mesa swelled the streams and flooded the lowlands. The dirgepipes scraped and clawed their tempestuous way along the muddy road, driving the mourners ahead of the assaulting sound. There were only a few of us, as it was not safe politically to weep for rebels. My grandmother m'Dame Vellia, Melian the Hunter, my younger brother Jocquin, and a few others were all that dared attend. The funeral paint was a caked and irritating whiteness on my face. The sheeting rain rivuleted the paint, staining the clothing with splotches of leperous white. I was young. I didn't understand. I felt no sorrow—you've heard that said of children in my situation. My entire being was caught up in the minor discomforts: the chilling wetness, the crawling irritation of the funeral paint, the clinging sogginess of my clothing, and the heaviness of the mud caking my feet. All this drove the greater pain away. The two white-veiled carriages could have contained any of the unknown dead that had passed our home on the way to the gravepit. I cared not. The dirgepipes agonized on, the pipers looking petulant and casting angered glances at the clouds. I remember their cheeks puffed like blowtoads, and the pipes glistening

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with a sheen that was not varnish but water.

The two bodies that had been my father and mother were dumped over the cliff and went twisting and crashing down to scatter the half-bare skeletons beneath. The uproar sent the legions of carrionbirds into the air. The pipers wailed on, and the stench drove us back from the pit. The pit called Gehenah.

"Why do they burn Gehenah, m'Dame?" I asked a few weeks later at one of the quarterly burnings of the pit. The insurrection seemed to have quieted with the ebbing of the floodwaters. Jocquin and I had completed the Rites of Purification.

My grandmother had her filter over her face. The two of us stared past the lip of the cliff and down to where the flames charred the bone-white landscape.

"We burn them so we can forget them, Gershom." Her voice was deepened and muffled by the filter, as if coming from some ill-defined depth. The carrionbirds circled overhead, shrieking frustration as the fires devoured their food. Their distress recalled the wailing of the pipes.

I wondered that even the dead could remain still while being tortured by the flame. I stared down at the spot where I had last seen my parents and marveled that they remained so quiet and unprotesting as the noisome fires covered them. Naive?—yes, I don't think I yet realized.

"M'Dame, how do they do it?"

"What, child? Burn Gehenah? They take oil and—"

"No," I interrupted impatiently, not realizing that my question had been vague. "Why don't they scream?"

"Those down there?"

I nodded.

"Because death is a habit, and death supposes itself supreme, and the habitual and supreme, Gershom, won't acknowledge change."

My grandmother was known for giving lofty answers to simple questions, an irritating habit but one tolerated because of her age and acknowledged wisdom. Even we children knew she answered questions only for herself, and as a matter of course, assumed we wouldn't understand. Obscurity, at least, is not inattention. Her answer evidently pleased her, for I saw her filter rise as the thin mouth underneath lifted in its creviced smile.

Finally, she took my arm as the carrionbirds settled down once more on their smoky roosts and the last orange flicker of the burning collapsed in ashen exhaustion.

"Come on, Gershom. It's not healthy here."

I'd never considered it other than unhealthy. Even I, young as I was, could tell that fetid and fey presences gathered there. It was my father's jest that Albalard held meetings amongst the corpses. M'Dame had told me of other worlds in the legends of the Settling, worlds where the dead took

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land from the living, or where they burned the dead immediately without feeding the Earthmother, or where the dead were considered loathsome and left to rot where they had fallen because none would taint themselves by touching. At least our customs are familiar—habitual.

We walked home with the stench of smoke in our clothing, and above us the burning had muddied the sky. Three days later, I watched as m'Dame Vellia was herself dumped ingloriously into Gehenah, a casualty of a secondary sweep of the rebels condoned by the Terran Regent and carried out by Thane Albalard.

Memories such as this come often when I work. My ancestors very likely had them, for there have always been Thanes and always been insurrections by a small faction, and the d'Vellia family has always seemed to be involved. Now that the Terrans have come, things are no different. Someday, I'll exorcise the ghosts, and I'll have perhaps the most gruesome work of art ever created by Homo sapiens, Terran or otherwise. It would be good to shock them out of their complacency and make them realize that despite their holding of Terra-home, other people are capable.

Dreaming again, with chisel in hand. My laziness shows. Albalard (the Second: the First died violently and years ago) wants his statue completed for the Fete to honor the new Terran Regent. It's nearly finished, and my studio bears the evidence. The room is littered with marble chips and shrouded in dust that glitters in the sun coming through the windows. But from the rubble rises a figure, still rough in part, but recognizable. Long dour face; deep eyes shadowed by overhanging brows; thin, sharp nose broken midway so that it renders the face asymmetrical; a cold slash of a mouth with thin, pursed lips; a thick, bullish neck; muscular shoulders and chest; a stomach lined with exercise (but look, there is the beginning of a paunch); long yet sturdy legs. Albalard.

I'd done all I could with the power chisel. It slices the rock as if it were soft cheese, but I find it too brutal for delicate finish work. Hand tools must still be used. The artist must still touch his creation to breathe life into it. Not that any artist here will admit I'm capable of such. They cling to centuries-old methods and styles and call anything new 'trash'. And not that I'd particularly care to breathe life into Albalard. Quite the contrary. I wish the original were also cold stone. However, he will eventually lie in Gehenah like the rest.

I'd set the power chisel down and gone to my desk for a mallet and small chisel when I heard the noise of dirgepipes, wailing in musical distress on the street below. Setting the tools down without reluctance, I went to the windows that run the length of the south wall, and looked down. The avenue three stories

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below was crowded, waiting. Turning my head and leaning forward, I could see far down the street the towers of the Port. Closer to me, but blocks away yet, was the head of the procession. The teeth-grinding noise of the dirgepipes echoed along the street.

Behind me, I heard the door to the studio open. There was a shouted "Gershom!"

"By the window, Jocquin," I said without turning. Jocquin came and leaned out with me.

"The new Regent?" I asked, still staring at the approaching line of marchers. The pipers could be seen as individuals now, and their music nearly made conversation impossible.

"Yah. That's what I came to tell you. You might want to see this. The Insurrectionists have a diversion planned."

I turned to look at him. His sandy hair was swept back in the wind and his lively eyes squinted against it.

"Diversion? Damn it, Jocquin, are you involved—"

He shook his head quickly. "No. I told you I wasn't with them. Just watch."

The entire Musicians Local must have been summoned for this. The music was deafening. At least it's good to realize that while we've grown used to it, perhaps even to like the sound, it must grate and din in the Terrans' ears. We make their first impressions of our planet as unpleasant as possible. Death-world, they call this, saying we're obsessed with death and stagnation, and so we welcome them with dirges. We have no other music.

We watched the pipers file past and then the ranks of courtiers bearing the banners of the Thane and Terra. The crowds along the street were silent, pressing close to the marchers as the courtiers passed and the car with the new Regent and the Thane approached. The car was domed and sealed, and I could see little inside from our vantage point.

It was almost directly underneath us when the first signs of trouble began. There was a stirring at the outer edges of the crowd, and suddenly umber globs were in the air, falling on the car and the guards around it. I didn't have to be near to know what it was. Dung. The Insurrectionists, to their credit, protest symbolically. Few people are physically hurt by their demonstrations and Albalard has yet to capture one of them. I doubt that it will remain so. My parents were certainly willing to use violence and they died by it, because it seemed that other methods were ineffective. The new rebels will realize that soon, and the pattern will begin again.

Jocquin was laughing hysterically. The bombardment continued as the crowd tried to flee from the area. Everything was in confusion, the march halted and the pipes stilled. "Jocquin, this is no good. Albalard—" I didn't need to finish. We both saw the Thane's men appear as if from

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nowhere, their scarlet hair-plumes bobbing in the crowd. They had stings out, and used them liberally. I turned away from the windows as Jocquin choked off his laughter. It was going to be brutal; Albalard's reprisals always are, as were his father's. Jocquin watched, and I could see his hands clenching and unclenching on the sill. For myself, I held mallet and chisel in hand and stared at my sculpture while the wailing that wasn't the dirgepipes swirled in the studio.

When Jocquin finally turned from the window, I'd gained control of myself and had started tapping at the reluctant stone. I worked carefully, remembering that it's easier to remove than to add. I felt Jocquin's eyes on me for long moments, while the sounds from outside ceased and silence returned.

"How can you stand to work on him after seeing that?"

Mallet poised to strike, I looked at him. He stood in the light from the windows. In the dusted air, he threw a distinct shadow through the gilded atmosphere of the studio. I couldn't distinguish his face.

"It's not 'him', just a piece of stone; and if I stopped, it wouldn't change a thing. You know that." I brought the mallet down, and a flake of marble fell to the floor. I brushed at the cut.

"People were hurt out there, maybe some killed—I don't know. Doesn't it bother you?"

"What can you do? Gehenah will receive its due without Albalard or the Insurrectionists or the Terrans or you." I accented my words with mallet blows, then let my tools drop to my side. I glanced at him.

He had moved out of the wedge of windowlight, and his eyes weren't directed at me but at my work. "I don't understand you."

"No," I replied, as gently as possible, "you don't."

He muttered some low words I couldn't hear. The sculpture frowned down on him, larger than life. Jocquin sneezed quickly in the mote-filled air, and I could see the particles eddy in the light.

Always we seem to circle each other like this, meeting in sibling affection and ending in frustrating irritation. We can't stay apart, but we can't remain together without quarreling. The days when we played together and worked together ended when I apprenticed myself to the artisan Faibe and he went to work at the University. Perhaps it was my fault, trying to be brother and parent. Stay out of the Insurrectionist movement, I told him, and he does, but doesn't care for the advice.

I put the tools down at the base of the sculpture. Hands on hips, I faced him. "I'm an artist. I'm not interested in ridding the planet of Albalard or even getting off-planet as long as I'm allowed to work."

"I know." He cut me off with a wave of his hand. "You've said the same words a thousand times before. It still doesn't mean anything to me.

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It tells me only that you don't care for the family. Don't you aspire to anything?"

I shrugged. Always it's the same questions. "I'd like to carve in lifian-stone. I'd like to do a soundsculpture. I'd like to be in the Guild and have my work seen off-planet"—again a shrug and a deep exhalation—"but the Insurrectionists can't help me with any of that."

Jocquin shook his head slowly and looked again at the stern countenance of Albalard. "No, they can't." He turned and walked quickly to the door, before I could say anything. Not that I could ever say anything to heal the rift between us. I saw how Albalard dealt with rebels. I saw our family rot in Gehenah, and the stench still lingers. He was too young. It isn't real to him, and I, the artist, can't create it for him. So I watched him and picked up my tools again.

"Later," he said, and the door closed behind him.

I spent several hours after that trying to put the sculpture in some semblance of its final state before I went to see the Thane. Earlier in the day, he'd sent word that I was to come to the Keep in the evening for a report on my progress. By the time I'd cleaned my tools and done some cursory straightening of the studio, the sun had already fallen behind the gaunt towers of the Port and the ceiling-globes were on. As is my wont, I spent a few minutes poring

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over the sketches I'd made for the Gehenah sculpture. Someday, I'll have the opportunity and the means to use them. Finally, I looked at the figure of Albalard, trying to see it with a viewer's eye, and as always, I failed. Petty as it sounds, it is one of my great disappointments. I can't see my own work as a finished project; only with omnipotent eyes that view it through the gauze of many stages. I note the ridge where once the chisel slipped, or the small part I missed in the polishing—details, but never the whole. Never do I see my work with fresh, virgin eyes, so I can't know if my work is worthy of note. Ah, it doesn't matter. I closed the door.

The Thane's Keep is massive and threatening, built by the Terrans when they returned to pick up the shards of the empire they'd built and lost. The Regent and staff inhabited most of the building, with Albalard having the run only of a few rooms. Like most such architecture, its function was to remind colonial mankind of the strength and vitality of the Homeworld. My old teacher, Faibe, described it sarcastically as the 'Almightly School of Architecture', designed to intimidate, awe, and overwhelm the human being who entered. The ceilings were high; gilded, coved, and frescoed, held by arched buttresses that met somewhere in the heights above. It dwarfed man, this building, and the edifice itself is made small by the landscaped grounds about it. The Keep was built to house a race of giants, the race no doubt the Terrans believe themselves to be.

The doorwards let me in only after a more than perfunctory search for weapons. The incident with the new Regent must have angered and frightened Albalard. Like all of Albalard's men, the doorwards wore the hair-plumes. The Terrans seem to feel no need for protection, or perhaps their technology safeguards them, for the Thane's men are the only security people for the Keep. I felt an insane desire to pluck out their hair-plumes and watch their stoical expressions change. However, I'm not a fool.

After running the gamut, I sat in a receiving room, waiting for Albalard. Like all the Keep, the room was built on a grand scale, larger than many of the city's houses and made larger still by mirrored walls. I sat amongst a multitude of myselves. Perhaps the Terrans find such vanity pleasing. I find it schizophrenic.

Albalard whirled in as the door to the room dilated. He wore a furred robe and a magnificent iridescent hair-plume that nodded above him. He scowled in angry hauteur, acknowledging my presence with a snorted exhalation. I rose.

"Sit down, artisan. I haven't time to waste. I should have sent one of the lackeys to see you. Is my sculpture done?"

"It will be, Thane. A few more days. Do you wish to see it?"

The Thane had paced the length of the room, his eyes on the walls and

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his reflection. Now he turned and looked at me. Rings flashed with his motion. The man was an ambulatory jewel, glinting his sequined passage through the Keep. "Do I need to see it? Will it offend me?"

I shook my head, trying not to watch myself in the wall. Albalard examined himself again.

"The Fete will be in a week. See that it's here then." He turned as if to go, then hesitated. "That disturbance today. You wouldn't know anything about it?"

"No." Shortly, curtly.

"Your family has a history for being caught up with such stupidities. You could well hold a grudge, d'Vellia."

"I don't." The lie was glib and easy. I'd said it so many times before.

Albalard for the first time faced me directly. His dark eyes stared at me, but flickered away now and then to either side. It is one of his faults. His gaze lacks intensity: it cannot intimidate. It's also a drawback that can't be entirely reflected in stone. In that respect, my sculpture is superior to its subject.

"The disturbance took place directly below your studio. I didn't fail to notice that."

"A coincidence, Thane." I affected unconcern.

"Perhaps. An odd one." He stared a moment longer, then nodded dismissal. I rose from my seat. "Don't leave yet, artisan. The Regent wishes to see you."

My surprise must have shown, for Albalard smiled, a mild amusement.

"Why?"

Albalard shrugged, still smiling.

"Who knows? The Terrans do as they will."

The door dilated and he stepped through, stooping so that the hair-plume missed the upper edge. The rush was unlike him. He seemed eager to go, as if anticipating some pleasure elsewhere. I had little chance to ponder, for the door let in the Regent. She must have waited outside.

She, for the Terran was a woman, was like the rest of her kind. Hard and cold and glittering. She wore a short tunic and no hair-plume, for the latter was not a Terran custom. In fact, I don't believe them to have customs. They change habits rapidly. I noticed that she wore body-polish, for each finger of her right hand was a different shade of scarlet, as if her hand had been dipped in the setting sun. She also wore mouth-glitter. Her lips flashed when she spoke.

"Gershom d'Vellia?"

I nodded. It was difficult to avoid staring at that mouth.

"I'm Tha. d'Embry, the new Regent."

"M'Dame."

"You may sit." I stood until she had chosen a chair for herself, and then took my seat. The Terran crossed her legs. One kneecap was tinted blue, the other sea-green.

"A pompous and vain fool, isn't

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he?" She nodded her head in the direction of the door.

I thought that she either judged me fool enough to spout treason in the Keep, or she simply didn't know us very well. Either way, it would do nothing to speak. I remained silent.

She tilted her head, giving me a sideways glance, and now I saw that her earlobes too were dashed with color. Burnt orange. Terran fashions disgust me. They're too changeable.

"You hold your tongue. Alright." She changed subjects with a subtle change in the tone of her voice. "I've business with you, artisan. The former Regent recommended your work highly. He felt that you had potential for gaining a reputation off-world."

She waited for reaction. The old Regent was an aged diplomat, and in his dotage he took on a parental fondness for his native children. He praised our art highly and myself specifically, even when my fellow artists ignored my work. He was also the man who let the purge of rebels take place, killing my parents. I hated him.

When I again said nothing, the Regent continued. "Your work has been seen by those who are capable of judgment. Your portrait bust of your grandmother, your tomb for the first Albalard, and especially the monument to Peace have gained praise, insofar as a hologram can convey reality.

"Gershom, have you seen the soundsculpture by Durnhelm?"

"The one in the Upper Hall? Yes, I have. I find it a piece of pastoral nonsense."

If she expected me to spout praise for that Terran bungler, she was disappointed. For all his far-flung reputation, he's shallow. The piece in the Keep is a travesty of the potentials for soundsculpture. Carved in a warm, pale-blue lifianstone, it is a rendering of a grove of Terran trees. The noise of the Keep is transformed by the sound system into the chirping of birds. It has no poignancy, no strength; it doesn't move the viewer. Even the lifianstone seems dissatisfied with its role.

She was nodding her head, whether in agreement or mere acceptance, I couldn't tell. I brushed at a remnant of marble dust on my leg and waited. If Jocquin accuses me of cooperating with the Terrans, he knows I would never make it easy for them.

"Do you know the electronics necessary for soundsculpture?"

"My teacher educated me in all aspects of my art, whether or not it seemed likely I would ever be allowed to work with them." Sarcasm rode lightly above the words, but broke on her glacial calm. Always supreme, Terrans make it a habit to ignore the meanings woven into words, pretending that if unnoticed, they will vanish.

"Good. I have the pleasure of informing you that a block of lifianstone and a selection of sound components will be placed at your disposal."

If her words were intended to

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shock, they succeeded. I tried to hold to my skepticism, but Gehenah, the sculpture, floated before me as it could be if I had the materials. I couldn't speak.

The Regent smiled. On her icy face, I almost expected that expression to crack and fragment her features as if they were porcelain. "It's part of the cultural assimilation program. If you do as well as expected, you'll be admitted to the off-planet Guild of Fine Arts. You'll also be permitted to accept off-world commissions, and you'll be given a visa to allow you to leave. In short, you'll have some of the rights of Terra."

Her last words dissolved my amazement. I managed to find my natural distaste for Terrans.

"Some of the rights. Not all?"

"In time, perhaps." Her smile, coated with the mouth-glitter, was ludicrous. By Terran standards, she was probably beautiful, but I prefer less flashiness. And I'd begun to sense the price tag attached to this gift. Gehenah receded.

"If you'll excuse me, m'Dame, this doesn't make much sense."

"We don't intend to become involved with local politics. Frankly, I don't care whether Albalard or the Insurrectionists or the dead govern here. Terra is concerned with the off-world whole. We let the parts care for themselves."

"I still don't understand."

"This grant of lifianstone is a token of our interests in your world. It's intended to demonstrate both that we don't intend to chain your people here—in fact, there are fifty systems now full members of our Federation—and that we'll work with anyone in power here."

"I see. And the d'Vellia family has always been associated with the rebels, and I'm to be a symbol of hope, flitting from star to star."

Anger flared in her eyes and her smile collapsed, but then her training took over. The lines that had furrowed her forehead smoothed, her eyes became again cold and hard, and her mouth settled into an expression halfway between smile and frown.

"Perhaps I'm not telling this as well as I could." Her voice was silken but brittle, tightly controlled. "You are potentially a good artist. You know it. We would foster that in any case. You may believe that or not as it suits you. The fact that you're a d'Vellia and that your brother's with the Insur—"

"Wait a minute." I halted her with an upraised hand. "Jocquin's not involved with them."

"You're mistaken. Our sources are unimpeachable."

"He gave me his word."

"He lied."

She said the two words coolly and confidently. I wanted to rage across the room and make her cringe and deny them. But I sat.

"And you say Albalard believes Jocquin's involved?"

"Not yet, but he'll find out when

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he questions the two men he captured this afternoon. Why do you think he was in such a rush to leave you? His methods are brutal and effective; and to him, pleasant," she said bluntly.

"I'm leaving." I rose and nodded to her, but she also stood. "A moment, Gershom. Let me finish. Your planet has things to offer us, but it's not rich. We could abandon it and not be concerned. If the Insurrectionists gain power in their present mood, they'll demand that we leave, and we will. You'll be left to scrape out a life from the dirt of your world, cut off from the rest. Your brother I can and will do nothing about. He has his own life. But I don't care to see your talent wasted, closed in on one small place, thwarted. That's our task, to bring to the Federation the best of each colony."

At another time she might have swayed me, appealing to my ego. But I was too angry now, with an anger that had no direction, nothing to channel it. I was blinded to her words, and because she spoke without passion—only a chilled recitation—I ignored her. I brushed past and went to the door.

"Gershom, what about the lifianstone?"

I hesitated and turned to look at her. She stared back. The walls mirrored several pairs of us. Angry and final words came to me, but I couldn't utter them. "Let me think," was all I said.

The door dilated, and I turned and left.

My anger dissipated somewhat as I left the city and in a windborne drizzle, walked into the countryside beyond, making for the old house. I had time to think somewhat, to consider what I had to believe was a bribe. But it was tempting. Faibe had taught me many things, among which was love for the material I worked with. Lifianstone was the ultimate, no matter what the locals say against its off-world origin. They are narrow fools and none of them love me for having shunned their traditional styles. Lifianstone: pale, almost colorless, half-mineral and half-something else, able to be shaped easily. It could in the final stages be colored at will, and made permanently warm or cool. Its texture was hard but yet yielding: it was like working in flesh. It was terribly expensive.

It was a fine bribe for an artist. I wanted it badly.

Jocquin wasn't home when I arrived. I fixed us a small supper and sat sipping at a cup of steaming mocha, listening to the house groan in the wind. I scraped at the mud on my shoes. Like most things on our planet, the road hadn't changed in more years than I can remember. It was still unpaved, rutted, and often muddy. For that matter, I sat surrounded by antiquity. The scarred table where my food grew steadily colder was made by my thrice-

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removed grandfather. The oldest portion of the house was constructed nearly a century and a half ago, and sits on the site of an older dwelling that dates back to the Settling, for the d'Vellia family is one of the First. First, as much as the house of Thanes . . . and the city itself, clustered about the Port as always, growing hardly at all. Ours was, as the Regent implied, not a rich world.

Jocquin was in a foul humor when he arrived. His shirt was circled with perspiration under the arms, and made wetter still by the rain. His hair was matted to his head. I watched him jog up the road from the kitchen window, and felt the house shiver as the door slammed.

"Gershom!"

"In the kitchen. There's food ready for you. I saw you coming up the road."

He came in, drying his hair with his shirt, and poured himself mocha. He dished his food from the warmer.

He toyed with his meal, looking at me. I thought him upset by more than the weather. His eyes were wild and his breath came raggedly.

"Have you kissed the Thane's foot sufficiently, brother?" he said at last.

We had argued too often on the subject for me to feel anything but weary. "Let it go, Jocquin."

"He tortured two Insurrectionists today, while you were at the Keep. Did you hold the irons?"

"What the hell do you think I am?" I went to the window and looked out at the empty road through the rain-spattered crystal.

Behind me, Jocquin's chair scraped against the floor. "Lifian-stone is fine payment, no doubt."

I whirled to face him. I still loved him as my brother, but for a second I hated him. The words rushed out, stumbling over themselves, shouting.

"You don't know me at all, do you brother? I've fed you and lived with you, but you still don't understand. Things don't change here. How many people have the Insurrectionists converted? Twenty? Thirty? Out of the thousands in the city. No. I don't belong to them, even though our family always has. But I wouldn't ever betray them to Albalard. I haven't anything but disgust for him. He pays my bills, he puts food in my mouth, *and* yours, but I won't help him." I sighed, and my voice quieted. I felt somehow foolish. The air was charged with my angry words but I had leeched my hatred away. I could only be sad that I couldn't make him understand.

"So you have spies in the Keep," I said, when silence had dispelled the irritation.

"The Insur—"

"I know you're part of the organization. The Regent told me."

He didn't hang his head or apologize. I hadn't expected him to. He looked straight at me, daring me to accuse him. "I didn't want to hurt you."

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"Thanks." I didn't mean it to be bitter, but I knew it was.

"And the Terran's told the Thane?"

"No. But your prisoners might have."

Jocquin rose and made as if to put his hand on my shoulder, then let the arm drop to his side. I knew the final ties had been severed between us.

"Let me have my chance, Gershom. You've made your choice. I've no great dislike for it. But someone has to do what our family has always tried to do."

For once, I didn't try to dissuade him. I felt as old as the house.

"Gershom, we've determined that force must be used. Our men have been killed. The Thanes have been cruel and vicious despots. Something has to be done."

"Our parents tried that," I reminded him.

He shrugged.

"Your food's cold." I put my back to him and stared again out of the window. The hill to Gehenah loomed under its covering of trees.

I heard his chair and the rattle of crockery. "You won't even mourn if I die," he said.

The house creaked in a gust of wind.

The next morning, I contacted the Regent, and the lifianstone was delivered to my studio. I began work on Gehenah. Jocquin was gone when I returned home late that night, and he didn't return.

When he didn't come back the next day, I went to look for him. I'm not really sure of my reasons. He was years beyond my needing to care for him, well past the legal age of independence, and after our argument I didn't intend to ask him to return. I only wanted to know.

It was easy enough to surmise where he'd gone, so I did not waste time in the city. Our family had been too long embroiled in the underground for me not to know where to contact them. I went away from the Port, into the lonely countryside past the gravepit.

I hoped to find Melian's house, he who had dared to attend my parents' funeral. His son would be there, and I was sure he would know. I hadn't been there since childhood, but the land hadn't changed.

I was in the greened shadow of a thick forest, walking a path that meandered through the remnants of autumns past. It sometimes seemed lost under the thick covering of leaves, but could always be found again. Certainly it was well-traveled, for while the mulch of the forest was loamlike in texture, the ground beneath the path was packed hard. Just beyond the wood and past a turn in the path, would be Melian's house—providing my memory was correct.

The city and its politics seemed far away. Here, the stasis that locked in our world was in full force. I could return to this place year after year and perceive no change but the

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nearly imperceptible growth of the trees. I was caught up in a dream, a land that seemed eternal. Perhaps that's why my people are so uncaring about the dead. They, those who lie in Gehenah, are part of the dream, always knowing that the next day would be like the one before.

The trail bent around a particularly large tree, and there I found the path blocked by a man, illuminated spottily by the leaf-shadowed sun. I knew him, for I remembered Melian and his weathered, defiant face. I looked at Melian as he must have been when he was young—his son. He held a sting, and the muzzle was pointed at me. I didn't waver. I stopped, hands before me.

There was no need for introduction. It was plain that I'd been expected. "I'm looking for Jocquin d'Vellia."

"Where's your hair-plume?" The man's voice was as rough as his features, a voice of gravel and earth.

"I'm not one of the Thane's people."

"You're not an Insurrectionist."

"No."

"There are only the two."

"I don't agree."

"Ask your father."

We stood, a tableau, while the wind shivered the leaves and made the sun dance on the ground. At last, he let the sting go to his side. I relaxed slightly, and my stomach muscles told me how tense I'd been.

"For your family's sake, I let you go. Turn around and go back to your carving."

"Jocquin?"

He shrugged, and the sun slid over his shoulders. "You needn't worry."

"Would you tell him . . ." I paused, thinking of something to say that would tell him how I felt.

"What?"

I realized that I didn't know myself how I felt. I'd gone on a fool's errand, trying to change the unchangeable. "Nothing," I said, and began retracing my steps through the undersea light of the woods.

For the Fete, the Keep and the grounds around it were festooned with hoverlamps, glimmering in riotous blues, yellow, and, predominantly, reds. The primary colors only, for on our planet it is considered ill luck to decorate a festive occasion with weakened tints and shades. Darkness was banished for the evening. I might have felt a certain gaiety but for the fact that I knew, as did most revelers, that the light was also meant to reveal hidden intruders.

I saw the Regent talking with a group of her staff under a towering tree. A crowd of the lamps, all of them blue, performed an arabesque in the branches above them, throwing contorted shadows on them. None of the Terrans wore hair-plumes, but nearly everyone else did. I watched Tha, d'Embry talking, for this was the first time I'd seen that cool face possessed of animation.

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Her mouth-glitter—purple, I thought, but the light was deceiving—flared with movement, and her eyes danced in accompaniment. I was fascinated. It was the most human a Terran had ever seemed, the most uncontrolled.

She must have felt the pressure of my gaze, for she turned and beckoned to me. I came reluctantly, for I had no desire to be a showpiece of native culture, and that seemed to be all I was to the Terrans.

"M'Dame Tha. d'Embry." I nodded my head.

"Gershom." She smiled at me, but now that an outsider had come into the group all of her energy had been reined in. Her eyes were glazed with inner ice. Turning to her staff, she spoke. "This sculptor may be the first of his people to gain a foothold offworld." She didn't bother to introduce her companions, but turned back to me. "Where's your hair-plume, Gershom?"

I stared at her. "They're for Albalard's men."

"Ah," she nodded, but said nothing else.

There was a long silence while the hoverlamps swayed above us. I watched the shadows merge and flow across their faces, momentarily dimming the brilliance of their finery. When two of the men struck up a conversation about the music of Far Centauri, I mumbled my apologies and left them, feeling the eyes of d'Embry on my back.

I walked about the grounds for awhile, sipping at an ice I'd taken from one of the ubiquitous waiters and avoiding the groups of plumed gentry. For the most part, I was left alone. Here too, I was only a symbol. This was the Thane's affair and all the people Albalard's or Terra's. I was but living, walking proof of Albalard's mercy. *See that man over there? Yes, the one with the rough clothes and calloused hands. That's the sculptor. Comes from the d'Vellia family. A pack of rebels. I wonder that Albalard bears him.*

I can almost hear the whispers.

In time, I followed the flow of people into the hall where Albalard was to make his speech. My sculpture stood there, frowning over the assembly. Since starting on Gehenah, I'd avoided looking at it. I wanted to try seeing it with fresh eyes, like the work of another. I almost succeeded. I felt a part of the emotion that I tried to imbue the stone with. Albalard, in marble, stood in immovable strength. He was more than man; he was a stern and forbidding essence that could not be eradicated by word or deed. Excuse me, I say it badly. To know, one must see.

"It's a fine piece, Gershom."

I started in surprise, thrust out of my reverie. The Regent had come up behind me. I turned and saw that her mouth was red and her left hand blue. Her eyes I couldn't read, and they looked at my work.

"I see that you understand your world," she said finally, while the crowd breathed around us.

"M'Dame?"

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"Look at him. You've made him utterly stable. The way he stands, the way his legs are braced: all speak of strength. You have no hope that a government like the Thane's will ever be destroyed, and I doubt that the Insurrectionists have either. This has been going on for too many long years and generations."

"You read a lot from one statue." Like carrionbirds gathering about a corpse, the crowd sighed forward toward the dais where Albalard was to speak, and we were caught up in the flow.

"I read it in your society, too. Your population hasn't grown by much since the Settling; you still have only one city, and that crowds around the Port. Your customs haven't changed appreciably in a century, not even your fashions. The Insurrectionists have never gained popular appeal."

We were closer to my sculpture now. It glared down at us from the heights, framed by the unreachable ceiling. It alone was in the right proportion to the room; the rest of us were insignificant.

When I didn't answer, she resumed her speech. "Your people wouldn't survive off-world, though you might, Gershom. In a stagnant society, to survive you must learn the old lore and old customs and discard new ideas as contra-survival. Off-world, change is constant. Survival means throwing out everything but what works and ignoring the rest, no matter how venerable."

"Still pleading your case?"

"Do you feel you belong here?"

"I—," I couldn't answer.

"Excuse me. I have to get to the dais." She pushed through the crowd and was gone. Dirgepipes had begun to play a mournful air and the crowd again surged forward. I suddenly craved room. I knew what Albalard would say to welcome the Regent. I knew what the dirgepipes would play, and I knew the plumed crowd would cheer. I fought against the current, elbowing people aside. They glared at me, annoyed, and then turned smiling eyes back to the dais.

At the end of the hall, I leaned against a fluted column and watched the hoverlamps roam the landscape outside the open doors. Beyond the shadow of a grove of trees, the city-glow streaked the night sky. Few stars were visible except at the zenith. A chorus of insects made their assorted cacophany, but otherwise it was silent.

There were wraiths under the trees, flitting from shadow to shadow. For a second, I was unsure of my eyes, and I straightened. Behind me came the welling of applause and the beginning of Albalard's speech, booming through the sound system.

The hoverlamps reacted to the wraiths and began bobbing their slow way toward the trees. In the uncertain light I saw them briefly: men stalking through the grounds. They were not the Thane's men, their stealth and the lack of hair-plumes precluded that. For some reason,

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perhaps because I was still musing over the Regent's words, they didn't totally arouse my curiosity. It wasn't until they'd passed out of my sight beyond the side of the Keep, the lamps in nonchalant and too slow pursuit, that I realized they must be rebels. By that time, the lamps had returned to their aimless wandering and the grounds were devoid of movement.

I looked around, not knowing what to do. Down the length of the hall and above the waving of plumes, I could see the Regent and her staff sitting in a blaze of light, with the Thane gesticulating before them. His amplified voice vibrated the walls with words garbled by the echo.

The disturbance began at one of the many side entrances to the hall. I couldn't see but I could hear the distress of the crowd. The hair-plumes began moving deliberately away from the site as the noise grew. Albalard didn't seem to notice at first—his voice still swelled and shrieked—but Tha. d'Embry was on her feet, evidently shouting something to her staff.

Perversely, I forced my way toward the dais. I found myself against the flow of the crowd once more, for now they anxiously tried to find a way out of the hall. I had to fight to remain stationary, the pressure was so great.

Albalard had seen the trouble, and his stentorian voice bellowed orders to his men as he sought a way from the dais. I could hear the crack of stings, and the crowd screamed in response. Their flight was now panic. I fought, but was pushed steadily backwards with their mindless rush. I tried frantically to see.

There was another smattering of gunfire, and I saw marble chip from my sculpture, disfiguring the face. I think I screamed, for my throat was suddenly raw, and I lashed out at those in my way. Finally in the lee of a pillar, the crowd ebbed around me and I could watch.

The rebels had mounted the dais and the struggle spilled over onto the floor. They were vastly outnumbered, surrounded by plumed heads and grim faces. There were perhaps ten of the Insurrectionists, armed mostly with ancient stings. It was hopeless. Albalard had already escaped and the Terrans had left at the first signs of trouble. In frustration, in defiance, the rebels instead turned to the sculpture, where a stone Thane stood. I screamed again, and ran forward.

And stopped. For I recognized one of the men. Jocquin, his face contorted with anger, aimed his weapon at my work. I hurled invectives at the gods. I cursed.

It was almost over. Most of the rebels were down, and I couldn't reach Jocquin. With a mind numbed by shock, I saw him hit. I saw the blood gush from his wound, and saw his limp body fall from the dais to the floor.

The hall was emptied. The Thane's men herded away the rebels who

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could walk. Five of the Insurrectionists and three plumed men lay on the tiles, unmoving, their life-blood staining the floor. A ruined visage of marble stared down at them.

To my everlasting shame, I didn't go to him, my brother Jocquin. I couldn't bear to see his shattered body, his twisted face. I couldn't even go to see if perhaps he still lived. I couldn't.

Outside, where the gay hoverlamps swirled in ignorant abandon, I sat and couldn't even find tears.

Even now, months later, it's hard to think about. The remaining rebels were hung in public execution. Albalard, probably as a test of my loyalties since my brother was slain in the raid, ordered me to attend and sit next to him. Guilty and confused, I refused, and claimed asylum with the Terrans. M'Dame Tha. d'Embry took me under her protection, and under the aegis of Terra, I completed Gehenah.

I walk a last time along the rim of Gehenah the gravepit, a farewell visit, for in all likelihood I'll never rest there and let my blackened bones be fought over by the carrionbirds. Back in the Port, workmen are loading my soundsculpture into a ship. I'll take part of the pit with me, my admission to the void.

I recall the reaction of the Terrans to the soundsculpture. I can conjure up their faces as they stared at the tangle of decaying corpses, the contorted death-faces, the sunken features carved in frigid lifianstone the color of earth. Jocquin was there, his mouth open in a last curse; and Albalard, his strength dissolved by death, his plume ragged and drooping. Carrionbirds gloated among them. The Terrans' hushed movements were taken by the sound system and the bodies moaned and the carrionbirds shrieked. For the first time, I didn't need to be told. I know it had power.

Below me, in the pit, men are spreading the oil for the Burning. The carrionbirds wheel and sway above them, complaining in treble voices. I can almost smell the cloying foulness through my mask.

The ground sucks at my feet as I walk, muddy with the last moisture from this year's Flood. There were no demonstrations this time. The Insurrectionists, if any still remain, stay hidden. The people are no more happy or unhappy than normal.

The slight breeze bears the wailing of dirgepipes far away—the last call for the ship. I leave this world as I lived in it, the dirgepipes as heralds. I look a final time into Gehenah, trying to see among the bones some vestige of my brother. I fail, and turn away as the first flames lick at the bones. The carrionbirds, screaming, take to the air. I leave my filter on the path from the gravepit, not needing it any more. My life leads to the cold stars, not the Burning behind.

At my back, the carrionbirds cry. ■

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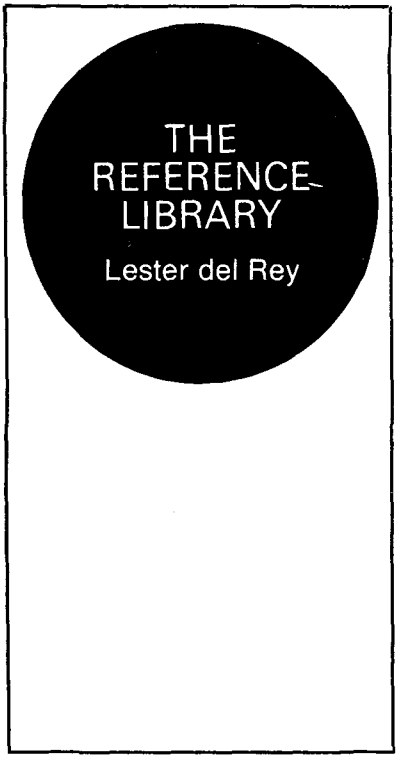

ADVENTURE

The origin of magazine—and by derivation, modern book—science fiction was probably the adventure story. That same source was responsible for many of the popular categories of fiction, and the western story is an almost pure example of it, with a severe limitation in background.

Essentially, an adventure story is a conflict of man or men against an exotic environment or culture. It could take place in the depths of a mine, in an African jungle, or anywhere outside the experience of the reader; it could also involve occupations strange to the reader, or meetings with strange peoples and cultures. It could be raw and crude—a chase of one man by another through mechanical plot devices; it could rise considerably higher and might involve men in a love-hate relationship with the dangers of work and environment in a logical development. Or in the hands of a Conrad, it could become a classic of man's struggles with himself in new situations.

Obviously the exotic challenges of new planets and scientific devices form an exciting background for adventure. Hence, today science fiction has largely supplanted most other adventure forms.

There are also other forms of science fiction, of course, and a fair number of novels—particularly by new writers—attempt to be very serious works. Some of these are almost lacking in plot or so deliberately obscured as to be difficult to follow, to the proclaimed appreciation of those who seem to enjoy studying a text more than merely reading it. (Judging by our history, such work and readers always exist—in a minority.) But in any event, probably ninety percent of science fiction is in the form of an adventure story—with or without added riches—and my guess is that at least half of the rest is bought in search of such adventure.

Adventure can be derivative, imitative, flat, dull—mere action, with little else. But in the hands of a good writer, even what seems to be a pure adventure story can be rich with character, background, development and that strange, indefinable feeling

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of vivid life that is the *sine qua non* of worthwhile fiction. That takes talent even above craftsmanship.

Maybe I'm still a child at heart (childlike, if you prefer), but my favorite reading is still a really good science fiction adventure. And this time, I've found three that gave me a great deal of pleasure.

The first of these is **Brothers of Earth**, by C. J. Cherryh (SF Book Club, $2.49, 246 pp. and DAW Books, $1.50, 256 pp.). This is Cherryh's second novel. Her first was *The Gates of Ivrel*, which came out several months ago and was a fine action adventure that promised a great deal, if she could keep it up.

Her present novel is one of the best stories I've read in quite a while—good enough that I read it twice and enjoyed it just as much the second time.

The beginning seems standard enough. For centuries, Morgan's people have fought through space against other humans, the Hanan. A Hanan planet is destroyed, but one ship escapes. Morgan's ship pursues and wipes it out. But Morgan's ship is hit, and only Morgan escapes—in a capsule. He lands on the planet toward which the Hanan ship headed. There, after considerable trouble, he is picked up by nemets, the *almost* human inhabitants, who take him on board their sailing ship for their city of Nephane.

But that takes up three pages of simple, clean writing, without flashbacks or tricks, where many writers have spent chapters doing it no better. Consistently, Cherryh tells and shows the reader all that he should know without needless waste of words—and does it with style and richness of effect.

Kta, the native who heads the expedition, shows friendship for Morgan in a cultured, highly-mannered way. And Morgan is taken to the ruler of the city—the methi, or ruler of spiritual and bodily affairs, or vaguely a priestess-queen. But she's Hanan! The planet was discovered 300 years before by Hanan, but the returning ship must have been destroyed, since the little colony was lost and went wild and savage, until kicked out by the nemets. Recently, a record was discovered, and a new group sent, later leaving only Djan, the methi, behind. (Methi because of ancient traditions among the nemets.) The ship returned to its home world—the ship and world that Morgan helped destroy! Now Djan and Morgan are the only humans alive on this world; and they're heirs to centuries of hatred of each other. Yet, since human and nemet are not cross-fertile, they are drawn by even more ancient instincts. And their relations are henceforth complicated.

Her motivation is too complex for Morgan, however, and he finds a measure of acceptance in the home (or almost, clan) of Kta. Despite the fact that the nemets are at a pregunpowder level of technology, he finds them extremely civilized. Family ritual, formal manners, and a deep code of honor dominate their lives without reducing the warmth of their relations. And they have problems, into which Morgan is necessarily drawn.

The city is going through turmoil

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as a hitherto slightly repressed group is using Djan and being used by her to rise against the "noble" families. This becomes increasingly ugly. Meantime, some other policies of Djan, excellent in theory, threaten to destroy all stability; and her power is backed by both tradition and her Hanan advanced weapons. There's also another major city which poses the risk of war, if things get out of hand in Nephane.

More important, throughout the novel is a steady conflict of nemet and human culture and attitude, complicated by outside forces. Indeed, so far I've only begun to skim the surface of the novel for its first quarter. There is a great richness of characters, including another "queen" who is far more complex and fascinating than Djan.

This is top-flight adventure, with plenty of action and very good plotting. But it's a great deal more. It's a novel of the evils and virtues of power, of spirituality and purpose, of prejudice and of love in many forms—the love of man for man against obstacles, and the love of hearth, family, coupling, and a great deal more. Very few developments of the story are predictable in their outcomes and means; and few are even slightly strained or unconvincing.

The writing is clear and direct, but it never lacks feeling. The characters are shown simply and they develop into people we know and respond to deeply. This is an admirable display of good writing without any unnecessary pyrotechnics to exaggerate it.

If I seem to be raving a bit, I am. I read few books that please me in totality as much as this one. And I haven't seen a new writer appear with more than one book to prove her worth so convincingly since Ursula K. Le Guin did *The Left Hand of Darkness*. I consider C. J. Cherryh a major new talent and a most important addition to our field.

Larry Niven is hardly a new writer anymore. By now he has established himself as one of the leading hard-science adventure writers, with a wealth of inventiveness and ingenuity that has made him one of our top writers. His *Ringworld* won both the Hugo and Nebula awards, and his paperback editions never seem to be out of print, which indicates a steady demand for them.

Surprisingly, so far as I know, his first solo novel in hardbound form is **A World Out of Time** (Holt, Rinehart & Winston, $7.95, 243 pp.). Almost as surprising for a hardbound book, it has an attractive dust jacket by Rick Sternbach.

Jaybee Corbell is awakened from frozen sleep in a future that gives him no reason to like it, then sent out as a pilot on a one-way voyage to seed other worlds in space. But he refuses his fate and finds a way to turn back, accompanied by a ship-robot brain that has become possessed of a real man's mind. The only way a return landing seems possible is by a difficult maneuver with a black hole. That gets him back to the Solar System—but three million years in the future.

Things have happened. The Earth is now mysteriously orbiting Jupiter. Everything Corbell knew is gone. There are wreckages that suggest a

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very high human culture at one time, but no remaining signs of people.

There's also a crone who seems to have a solution that will prolong life—something Corbell would very much like to have. But she seems equally interested in capturing him. And he flees into a world gone crazy, as far as he is concerned; flees with tantalizing hints of an immense history and a logic behind all the changes he sees—if he could only find it.

There's also evidence that real immortality was once achieved. He sets out to discover the means.

This is an inventive and ingenious as any story Niven has written. There are wonderful cat-snakes, boys who never grow up, old men who seem to have no boyhood, and a whole world of adventures. But there is also a good deal more solid character realization than Niven has usually achieved in the past. Here the assorted more-or-less human characters are as interesting as the science, and the relationships work smoothly.

Not that the inventiveness is lacking. Niven's answer to immortality is as neat as it could be; as simple and satisfying as it is effective. The novel doesn't have the single great idea of a ringworld, but it more than makes up for the lack.

It's one of Niven's best books and highly recommended.

Another promising new writer has just appeared. Yet this time, his name should be familiar to most of those who have been inside the fan groups for years. He has been mixed up in most of the fields of science fiction, from putting on conventions to publishing some of the better books designed for fans. He's also managed to become a member of First Fandom without being old enough—which is harder than it sounds.

His name is Jack L. Chalker, and his first science fiction novel is **A Jungle of Stars** (Ballantine, $1.50).

Savage is fighting the ugly war in Viet Nam when he gets shot while supposedly being rescued. He wakes up—or seems to—to hear a voice offering a deal: Immortality in return for unquestioning service to someone called the Hunter, who is a being of great power exiled from the Great Race to hunt down a traitor being called the Bromgrev. Naturally, Savage accepts—with some thoughts of getting a bit of revenge against the man who killed him.

But when Savage goes to work and traces clues for the Hunter, the Bromgrev manages to trick him into a meeting. There Savage begins to wonder just who the good guy is and who's the bad one. And he finds himself tangled up into a mess of earthly and interplanetary intrigue that has evolved into a war that spans the galaxy, against races and things beyond his previous willingness to believe. And with his torn loyalties, the plot develops to a real climax.

Chalker's writing is convincing, and his aliens and their worlds are well-drawn. The plot may seem wild, but it all works out logically. The various relationships and twisted identities of the story are effectively handled.

It's a very good first novel, and a

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fine promise for another well-known fan to emerge as a first-class pro. Recommended.

And now for a brief rundown of some non-fiction that bears in various ways on science fiction and deserves mention, either pro or con:

The Uses of Enchantment, by Bruno Bettelheim (Knopf, $12.50, 310 pp., notes and index) is an excellent refutation of the gooey idea that the old-fashioned fairy tales are bad for children, and augmented with facts by someone who has long experience with the psychology of children. (I'm not usually very propsychiatry, but any area of expertise is useful when in the care of a man who really knows his subject, as Dr. Bettelheim does.) I think modern science fiction and fantasy owe a lot to those who loved the old tales, and I've regretted the watered-down pap that is given to youngsters now in place of such tales. This book claims—and I think, proves—that the very material in the stories which was removed is precisely what the young child needs for a healthy development. If you have youngsters, go out and buy the book. Then see if you can locate some original Lang or Grimm Brothers. (And the original version of Pinocchio wouldn't hurt, either!) Let there be witches and fairy godmothers!

Maybe, indirectly, the book will take some of the stigma off adult fantasy and science fiction; it isn't hard to reason by extension that the BEMs and secondary-universe monsters are what all of us need in this age of confusion.

Small Is Beautiful, by E. F. Schumacher (Perennial Press, $2.45, 297 pp. with notes) is a book that should be of interest to anyone concerned with alternative futures. There are a lot of ideas here that could be and should be applied by anyone trying to think up a future Earth—either for himself as a place to live or as a background for a story.

It's another look at economics—this time in terms of the functions of economics in meeting the real problems of people, rather than in figuring up new indexes to explain why the old trends didn't work. In fact, it's a way of dropping all the mumbo jumbo and looking at economics as a tool for living. It's by a respected—though unconventional—economist who knows his subject so well that he can be lucid and amusing in discussing it. (He has also written a couple of other unconventional books, well-worth reading if they can be found.)

It's a best-seller at the moment of my writing; but don't let that fool you. It's a splendid book.

Anatomy of Wonder, edited by Neil Barron (Bowker, $14.95 cloth, $8.95 paper, 471 pp.) gives a brief history of the development of science fiction through four periods, as well as research aids and recommended lists. In each section, there are many short summaries of the novels of the period covered. These, however, are somewhat capricious in their evaluations and indicated comparisons. Probably a fine library book. If you're a reader looking for more information on the field, however, skip it.

The Space-Gods Revealed, by Ronald Story (Harper & Row, $7.95,

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139 pp., including appendix matter), bears the subtitle: "A Close Look at the Theories of Erich von Däniken." It carries a foreword by Carl Sagan and attempts to examine the facts that have been so freely distorted by von Däniken to "prove" his so-called theories.

I give Harper credit for publishing any debunking book on this subject, considering how rarely such books sell well. But I wish they could have done a far better and more extensive job. (It might have been nice to trace at some length the evolution of this new body of myth from Morris K. Jessup, who really began developing the idea.)

Here, much too much is passed over in favor of the more easily disproved "evidence," and some of the refutation that does exist in the book could have been better. I've seen clear photos of the Nazca lines that show them for the heterogenous set of overscrawled lines they are, but little can be told from the included picture.

If anyone really wants to test von Däniken, the test should be done step-by-step from original sources, as was done by Lawrence David Kusche in his *The Bermuda Triangle Mystery—Solved*—also from Harper, bless them! Story has picked on some of the more obvious errors and assumptions, but there are hundreds more to be covered. And so long as you don't account for nearly all, your true believer will seize on that and go right on paying his royalty tribute to those who exploit the space-god fad.

The intent may have been noble in this book—but the execution is paltry.

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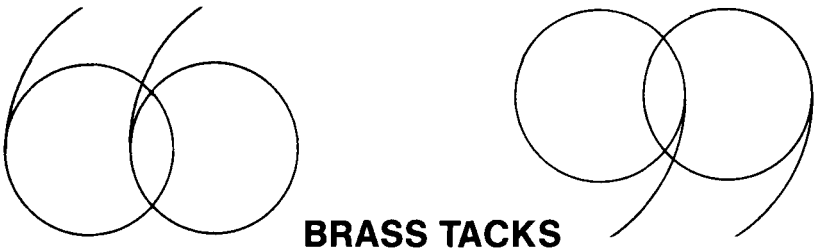

Dear Ben.

In all the conspiracies against the Atreides, not once has anybody ever considered one seemingly very potent factor: the daughter of Feyd-Rautha Harkonnen and the Lady Fenring (re: pp. 333 and 477 of the Chilton edition of *Dune*)—not even as a possible bride for Leto or Prince Farad'n.

Except for this tantalizing loose end (*Grandchildren of Dune?*) I really enjoyed the combination of Frank Herbert's writing and John Schoenherr's illustrations.

P.S. With the recent fluorocarbon discoveries I think this excerpt is very appropriate:

"One eighth of an inch of ozone gas is the only wall between earth and the death rays of the sun! He thought of the mystery of the upper reaches of the stratosphere, forty miles above the earth, and of that thin film of gas spreading through miles, but such a thin barrier, if compressed, against certain death for a whole world. Ozone, a form of oxygen, differed only from that gas in that its molecules are built up of three atoms instead of two. Supposing some tremendous change in the universe broke one atom away from the ozone molecules? Ozone would become mere oxygen! That so-thin wall of salvation would fade into nothingness, human life upon the world into eternity and oblivion." (Calvin Peregoy. "Short Wave Castle." *Astounding Stories*, February 1934).

Life—unfortunately—catches up with sf again.

LEO DOROSCHENKO

It never quite catches up, since good SF always examines "what happens next?"

Dear Ben,

Thanks for *Children of Dune*. Frank Herbert is a master of storytelling and seems at his prime when writing about the world of Shai Hulud, the Atreides and melange. I particularly like the way he weaves the ancient "struggle for power" plot around enticingly complex themes embroidered with a

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rich and highly realistic background. *Dune* often seems so real you can feel the grit of sand in your teeth and the odor of enclosed quarters, stillsuits and melange.

It also did my heart—and mind—good to see L. Sprague de Camp's article, "The Breeds of Man." There aren't too many writers who can handle the topic of race with such cool dispassion. I wholeheartedly support his contention and criticisms about those—on either side—who would squelch freedom of speech. Without that, we have nothing . . . Equality among men, except as it pertains to equality under the law, will never happen until test tube babies are the only way to fly and genetic engineering *forces* everyone to be literally equal. And who the hell would ever want to live then? No more Carlton Fisk home runs, no more Celtics fast breaks, (the Boston in me shows) or Mohammed Ali, or Brahms, or Harry Belafonte, or blondes, brunettes, redheads, dimples, etc.—just color it all gray. Variety, as they say . . . Besides, diets without spice are for the terminally ill. We haven't come to that yet, I hope.

By the way, I was pleased to see Kevin O'Donnell, Jr. place 2nd in the Analytical Laboratory for his story, "A Matter of Pride." It was a good piece. We recently accepted a story of Kevin's for our upcoming magazine, GALILEO. Even though *Galileo* will only be a quarterly the first year, we still need more writers of Kevin's ability. I'd appreciate any you might refer our way.

I tend to agree with the editorial in the April issue. But, damn, there's another old saying that the voters get what they deserve. Unless this country gets out from behind its TV sets and starts waking up, we won't be deserving very much. Everyone running this time around seems to be competing more for a toothpaste ad than for the presidency. A lot of smiles and no substance . . .

CHARLES C. RYAN
339 Newbury Street
Boston, Mass. 02115

Maybe the problem is that politicians find campaigning fun and governing burdensome? Good luck with Galileo.

Dear Mr. Bova:

With apologies to Stanley Schmidt, I would like to mention a problem not covered in "How to Move the Earth." This problem almost ruined "The Sins of the Fathers" for me. It's quite simple, the earth is not strong enough to support an acceleration of 0.5 g along its axis.

If the force is applied to the surface of a circle the size of the Antarctic Circle, the stress is some 500 times greater than the ultimate yield strength of the best materials available today.

Conversely, if the acceleration is limited to that bearable by basalt, and ignoring such things as the plasticity or liquidity of much of the earth's interior, the maximum acceleration is only about 4.77×10^{-6} g (0.000154 ft/sec^2).

This very low acceleration is based on the ultimate compressive strength of basalt. The recom-

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mended safety factor with stone is twenty.

There are ways of safely producing higher accelerations. However, these methods require either a great deal more of Mr. Schmidt's "magic" or long-range-preparations which couldn't be done by visiting aliens on the spur of the moment.

ROBERT A. TAYLOR
P.O. Box 638
Gate City, Va. 24251

Dr. Schmidt replies . . .

Mr. Taylor is quite right that you can't give the Earth that kind of acceleration by that kind of method—so the Kyyra didn't. But the problem isn't that it can't stand that much acceleration, *per se*—it's that it can't stand that kind of local application of force. So at the beginning, when the force must be applied at the surface, the acceleration is extremely small, and attended by disturbances of the crust which the Kyyra must use considerable care and skill to minimize. The acceleration is later increased by switching to the remote-controlled and unidirectional exhaustless conversion process and spreading it through a large portion of the interior so that not too much force is concentrated in any one place. Not simple or easy—but not fundamentally impossible, and the Kyyra have a lot of experience and are traveling deliberately prepared to do precisely this on precisely such short notice.

I won't be able to explain all the details, of course—the Kyyra have many centuries head start on me—but I have enough ideas about how it could be done, given the Kyyra's level and kind of science and technology, to hope that Mr. Taylor and others will be able to accept the possibility for the duration of the stories. Granted that, I'll leave most of the details of the driving to the Kyyra while I look as carefully and honestly as I can at what happens to the passengers.

Dear Mr. Bova:

A little learning is a dangerous thing/Drink deep . . . or do not write science fiction reviews. Lester del Rey's opinions are of course things to which he is entitled, but must you print them? His review of Tanith Lee's witty DON'T BITE THE SUN confirms the impression given by his equally ignorant reviews of DHALGREN and THE FEMALE MAN: the man is incapable of appreciating science fiction written with a viewpoint and purpose different from his own "Golden Age"-oriented view.

Let me steal an idea from Alexei Panshin: the emotional force—and the attractiveness to young people—of much if not most of science fiction derives from a single metaphor: the adolescent attempting to become an adult. In DON'T BITE THE SUN, Ms. Lee consciously carried this idea to its extreme point. Her entire domed-city society, which objectively *is* rather silly, is nothing more than almost any society viewed by a bright adolescent. Naturally the adults' jobs are meaningless, her contemporaries irritating, the adults both distant and foolish: have you ever listened to a group of teenagers? The external world of the book *is* the

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internal world of the teenaged viewpoint character.

This entire thing could get a bit heavy—who wants to have to both read about a whining kid and see the world as imagined by a whining kid?—so it is fortunate that the entire thing is done quite wittily. And naturally nothing "happens:" this is a story about a child growing up, not a melodrama.

Perhaps mine is a minority view: quite a few people I know hated DHALGREN, too. But with so few places where book reviews appear still left, Analog's Reference Library has enormous impact. Perhaps you could have more than one regular reviewer, allowing someone with a different viewpoint to alternate with Mr. del Rey. Or perhaps an occasional guest reviewer. Under your editorship the fiction in Analog has become increasingly varied in tone and style. Surely the Reference Library could also reflect the varied nature of science fiction today.

ALAN S. KORNHEISER
Springer-Verlag New York,
Publishers
175 Fifth Avenue
New York, N.Y. 10010

Nobody's going to like every review that a critic writes. However, del Rey's critical judgment spans a wide spectrum of styles and subjects. You're entitled to your opinion—as he is to his. It seems clear that del Rey tends to favor the objective, strongly plotted type of story that SF readers have enjoyed for generations, even though he has praised other kinds of fiction—when he finds the work done well.

Dear Mr. Bova:

Please match the illustrations with the text. Kelly Freas' International Geographic Magazine (June 1976) shows a January 2001 issue with the notation "continuous publication since 1603." Hayford Peirce's story "Side Effect" states: "The magazine has been published continuously since 1846." On page 100, the author refers to the 130th anniversary of the magazine. This gives the story a time peg of 1976, not 2001.

ALFRED M. POMMER
3117 Fayette Road
Kensington, Md. 20795

Obviously, the magazine changed its name after the editor was banished!

Dear Mr. Bova:

This letter is being written to request the aid of you and your readers. As an anthropologist, I am working on an annotated bibliography that I hope proves fruitful and important. The bibliography is on ethnicity and race in science fiction. I am interested in compiling and annotating works by, on, about, concerning, in reference to, or mentioning peoples of other races and ethnic groups: that is, non-whites. I have in mind being able to make some generalizations, from an anthropological point of view, about how sf writers see (or don't see) the factor of ethnicity and race in their speculations. I want the bibliography to be as comprehensive as possible: it will include short stories as well as novels. If you or your readers know of any little-known pieces or of previous research on this topic, I would

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appreciate any help given . . .

DR. N. BROCK JOHNSON
3780 Greenbrier Blvd.
Ann Arbor, MI. 48105

Does that include extraterrestrials?

Dear Mr. Bova:

I am writing to you because of the appearance of Stanley Schmidt's new Kyyra story "A Thrust of Greatness" in the June 1976 issue, and of the appearance of "Sins of the Fathers" in paperback form.

By appearance, I mean just that. How the stories were illustrated! The book (from Berkley SF) has one of THE MOST ULGIEST covers I have ever seen on an sf book. It appears to be a surrealistic view of a man (robot? Kyyran?) done in uninspiring (in other words, blechy) browns and grays. This style cover went out of style (so I hoped) about five years ago.

I like a cover that helps to inspire a "sense of wonder" or has something to do with the story. Both of the magazine covers had incredibly beautiful artwork. Mr. Freas did a great rendering of one of the Kyyran playing a flute. I hang a copy I bought from Analog proudly in my room. Mr. Gaughan's image of the flooding of Melbourne was loaded with excitement and mood. I loved them both.

Now, why couldn't Berkley reproduce Mr. Freas' cover onto the book version of "Sins?" Theoretically, a cover should attract attention to the book. Mr. Freas would certainly do that better than what is being used.

I suppose that there was some legal hassle about using the cover. Too bad. The book and the public are the losers for it. A great story deserves a great cover in my opinion. Analog certainly has a lot of both.

Tell Messrs. Freas, Di Fate, Sternbach, Gaughan, and Schoenherr to keep up the good work. By the way, how come Steve Fabian never has done artwork for Analog?

MARK MANSELL
15120 Ragus St.
La Puente, CA 91744

Since we buy only first publication rights to artwork, the artists are free to sell their work elsewhere after it has appeared in Analog. But book publishers want to do "their own thing." As for Fabian—we try to get new artists and new visual points of view into Analog, but there's too little space in the magazine to include all the artwork we'd like.

Dear Ben,

Readers of Analog who would like to update their information about current experimental results concerning ESP and Telepathy should read "A Perceptual Channel for Information Transfer over Kilometer Distances: Historical Perspective and Recent Research," by Harold Puthoff and Russell Targ, in Proceedings of the IEEE, Vol. 64, No. 3, March 1976 (pp. 329-354).

Positive and convincing results are detailed, and in addition, the reference list provides a fine delineation of previous work in the area of paraphysical research.

L.H. HOGUE

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1024 Tamarak Drive
Las Cruces, N.Mex. 88001

Puthoff and Targ are the scientists from Stanford Research Institute who "studied" Uri Geller—and fell for his tricks.

Dear Ben,

I just read and liked the July issue, incidentally noticing that both Arthur Clarke and Norman Spinrad made use of a term which I have long considered unnecessarily clumsy, to wit: "synchronous," as "geo-synchronous orbit." For some time in my work I have employed the term "Clarke orbit," which is simple and gives Arthur the credit due to him. I hereby propose that you throw the weight of Analog behind this usage, and pretty soon everybody will say "Clarke orbit." Now isn't that a splendid proposal? Yes, I agree. KEITH LAUMER

And so do I!

Dear Ben Bova:

I. C'mon now; "Stanley Schmidt" is a consortium of writers, *nicht wahr?* July Analog contained a good, taut, well-constructed yarn, "His Loyal Opposition," in which the exposition was clear and the character delineation convincing. After reading and enjoying it, I recalled that the same (?) author had written "A Thrust of Greatness" (June issue). It is rare that I cannot doggedly finish a story, however tedious. This was one of those occasions. The central gimmick was interesting enough, but the style was atrocious—overwritten, loaded with adjectives and inept attempts at character construction, full of unnecessary "reflections" and "Tom Swiftisms." It is hard to believe that the same author wrote both stories. After reading "Opposition," I had another shot at "Thrust," in case I had been in a particularly unreceptive mood the first time. But it was even more tiresome the second time round.

II. My profound gratitude to reader Joe Celko for his honest and courageous (in our schmaltzy, sentimental, liberal, one-worlder, *mea culpa*, current, White Western, intellectual climate) critique of Isaac Asimov's "The Winnowing." I am sick of the persistent invitations to genetic suicide implicit in those importunate pleas to feed little Kim Upchuck, Ram Dhamdhirti, or M'Bugga M'Bugga—or our own endlessly pullulating welfare generations. It is a biological perversion to comply. The case of "Latin" America is illustrative. It was colonized by Spain and Portugal a full century before the Pilgrims landed at Plymouth. Between the Rio Grande del Norte and Tierra del Fuego lie 8,000,000 square miles of land, every bit as well-endowed with natural resources as the US. Yet it is always we who are supposed to have a moral responsibility to rush aid and relief at every occurrence of a natural—or man-made—disaster.

Humanism, ecumenical religions, egalitarianism, democracy (that ultimate triumph of quantity over quality), medical science—in many of its aspects—and a kind of flabby intellectual dishonesty, are like to destroy our species. *There is absolutely nothing H. sap. needs so much now as a drastic culling-out of its scrub stock.*

PETER H. PEEL

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1323 North Wilton Place
Los Angeles, CA 90028
1. Stanley Schmidt is one person.
2. The world's needy could become self-sufficient in food production on a capital investment of about ten percent of the world's military budget. Charity—or welfare—should be aimed at self-sufficiency, not eternal dependency.

Dear Ben:

I had mixed reactions to Norman Spinrad's article on space colonies in your July issue. Generally I liked it. There was good information in it. However . . .

First, a minor technical point. The advantage of supplying material from the moon is substantially understated. The radius of a moon or planet, as well as its surface gravity, figures into its escape velocity. Hence the energy needed to escape from the moon is closer to 1/24th that needed from the earth, rather than the 1/6th stated. More important, though, is the fact that electrical energy can be used at all to launch from the moon, while it can't be from earth. If it could, orbital transportation would be cheap, even at 24 times the energy ticket required from the moon.

Next a more critical technical point. If the accuracy required of a lunar catapult truly represents the weakest link in the L5 technical plans, then I have to conclude that the plans are in good shape indeed. A figure of .00017% accuracy sounds stupendous at first, and it does indeed push the limits for purely mechanical components. In an active system, however—and the catapult itself will certainly be an active system—accuracy is determined more by the quality of feedback than by mechanical perfection of the components. Lasers are capable of performing measurements a million times better than a mere .00017%. In a properly designed system, they can make them fast enough and often enough that feedback is essentially perfect. I won't try to present a technical design here, but if Mr. Spinrad wants to see the gory details, he can write.

As to the remainder of the article, I'm less sure what to say. I can't quarrel with Spinrad's final position, but I resent some of the things he did in getting there. He's made free use of straw bogeymen and, it seems to me, misrepresented O'Neill's position to score some cheap points. O'Neill was talking about space colonies long before they got hooked up with the idea of solar power satellites. I don't think he's made any secret of his feelings that space colonies would be, first and foremost, nice places for a lot of people to work and live. Spinrad should also know that the power satellite business—while it may represent a "petty" attempt to justify something that should need no justification—is pretty much directly responsible for the current surge of interest in the project. Men who can recognize the importance of dreams are rare. Men who can impart those dreams to a whole society are rarer still. Granted, if none tries, none will succeed. It's a little arrogant of Mr. Spinrad, however, to assume that no one but himself is trying. In the meantime, Senator Smith wants assurance of a near-term practical payoff that he

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can hold up to his constituents and prove he's earning his keep. It's sad, perhaps, that our present culture works that way, but it does. Fortunately, dreams don't care how they get sold. If they're good ones, there will be no shortage of practical justifications. And once they take hold, they work the same magic on the spirit of the world.

ROGER D. ARNOLD

Route 2, Box 461
Vashon, WA 98070

As Spinrad clearly stated, he believes that large, self-sufficient colonies at the Lagrangian points are exciting prospects, well-worth doing in their own right. The problem is that to get Congress and NASA (and Big Business!) interested in the idea, O'Neill and his colleagues must show some "practical" reason for building the colonies. Hence the solar power satellite application. The worry here is that solar power satellites are probably the most expensive and least likely solution to the energy crisis, and if they are "shot down" by future decision-makers in Washington, the whole L5 concept will be down in flames too. Further, there is a real question about whether it would be wiser (and cheaper) to build the colonies on the Moon itself, thereby eliminating the costs of the catapult, mass catcher, and all the problems of building the colonies' structures. You would have to settle for an enclosed lunar low-gravity environment instead of a one-gee simulated terrestrial environment, but the capital costs would be so much lower that it might be more advisable to go that route.

Dear Mr. Bova:

You know something, there are days when I wish George Orwell's concept of 1984 was already here!

One such day was the day when my copy of the July '76 Analog arrived. I would have been interested in knowing just how many Analog subscribers, remembering that the cover to this issue had to be printed upside down, turned their copies over and over in a bid to decide which way they liked it best. Of course, it's just a guess, but my estimate would be well over fifty percent. (Maybe you should run a poll . . .)

The real reason for this letter, however, is to protest the two non-Science non-Fiction volumes reviewed in this month's Reference Library. It's bad enough to have a book about The Devil's Triangle labeled as SF by an editorial flunky at Doubleday, but to have such nonsense reviewed in a hard science publication like Analog—no matter how badly—is worse. Oh well. I'll forgive you this time.

P.S. I just rotated my copy of the Bicentennial issue again, and I've come to the conclusion that I like the cover best diagonally. This will give me a lot of problems when I decide where to put it in my bookshelf. Woe!

ADAM CASTRO

59 Harlan Drive
New Rochelle, N. Y.

Why not mount the issue on a verticle turntable? As for the non-SF books reviewed in The Reference Library, it is one of the most important tasks of a critic to help his readers spot the differences between hawks and handsaws.

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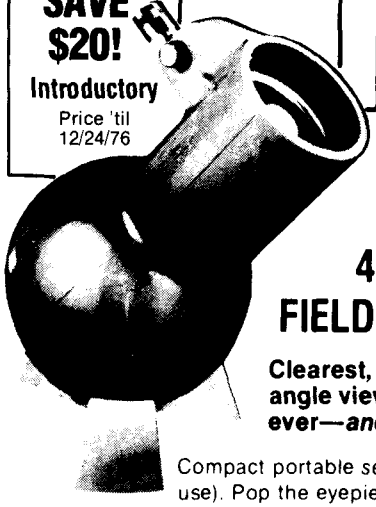

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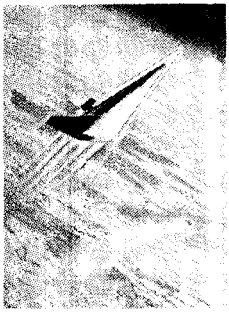

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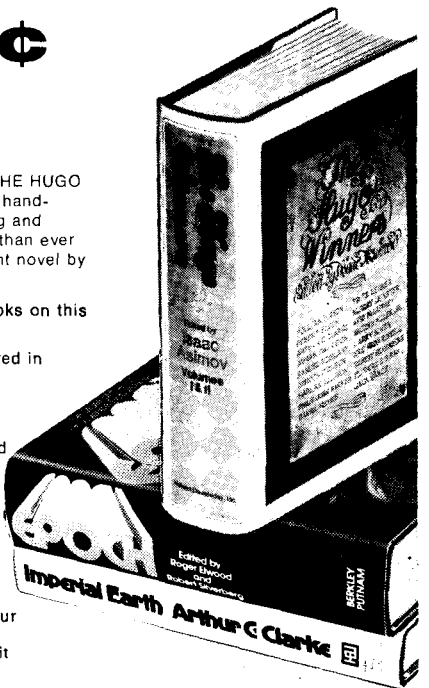

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